MEDICAL RECORD

Symposium on Internal Medicine, page 735

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December 1944

Vol. 157, No. 12

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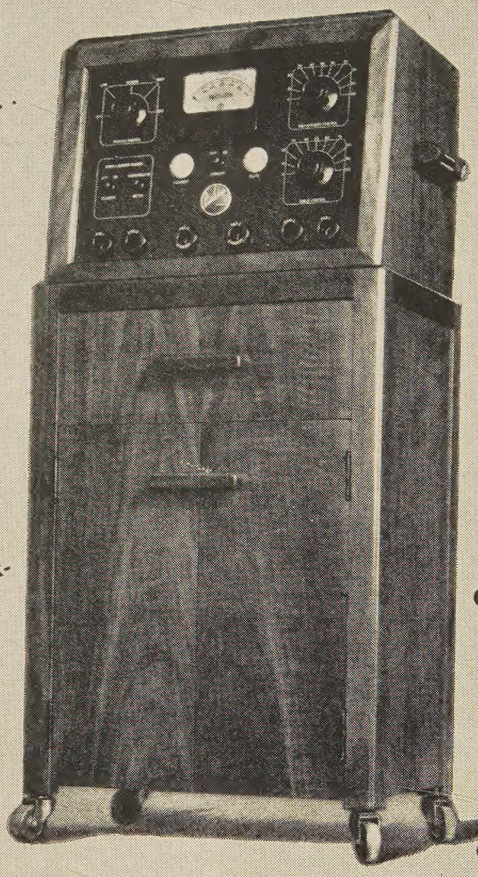

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Progress of Public Health Work in New York

A review of the progress made in public health work in New York City since 1900, with a review of major health problems said to be met, is presented in the November 3d issue of *Better Times,* published by the Welfare Council of New York City. The issue is dedicated to Bailey B. Burritt, who retired on November 1st as chairman of the executive council of the Community Service Society after thirty-one years of service.

Dr. George Baehr, in a historical survey of medical advances since 1900, points to the progress made in the fight against tuberculosis, the virtual elimination of diphtheria, the prevention of epidemics of cerebrospinal meningitis and scarlet fever, the discovery of the cause and cure of diabetes and pernicious anemia, and the steadily dropping maternal mortality rate. He cites the influence of the sulfonamides in controlling childbirth infections, and in reducing the effects of gonorrhea, and refers to penicillin as a "medical miracle". Discoveries in bacteriology and immunology, which led to pasteurization of milk, better and more consistent refrigeration of food and to modern methods of environmental sanitation, have resulted within a generation in prolonging the average life expectancy by more than ten years. This, together with a declining birth rate, will still further accentuate the rapid aging of our population.

Dr. Ernest L. Stebbins, Commissioner of Health of New York City, in an article entitled "What's Ahead in Public Health?" says that a new group of health problems springing directly or indirectly from the war will face the city in the postwar period. One of the most important of these will be the increased need for guarding against the importation of diseases by insect vectors. Air transport will introduce new diseases to New York City, and many returning service men may bring tropical diseases back with them. The city health department, he said, had established a tropical disease diagnostic service to supply specialized advice to hospitals and physicians, and in addition, the city's health officers and private physicians are preparing themselves to recognize these unfamiliar "imported" diseases. Dr. Stebbins refers to the need for the provision of adequate care of those men who suffered mental or emotional disturbances resulting from their war experiences and those who find difficulty in adjusting themselves to peacetime living. At the same time adequate provision must be made for strengthening the mental health of the civilian population, especially of the young.

Mr. Burritt in an article entitled "Mileposts of Public Health" said that the major steps taken in New York City since 1900 toward the goal of better health for all are, in his opinion, the directing of attention to the individual family and person, the development of public health nursing, the growth of the Health Center concept, and the emergence and practical application of the concept of keeping people well—preventive medicine.

Homer Folks, secretary of the State Charities Aid Association, in an article on "Bailey Burritt and Public Health," cites the establishment of the Mulberry Health Center and the East Harlem Center shortly after the first World War as among the most significant advances made in public health in recent decades. He refers to Mr. Burritt's rôle in the promotion of public health nursing as "inspiring".

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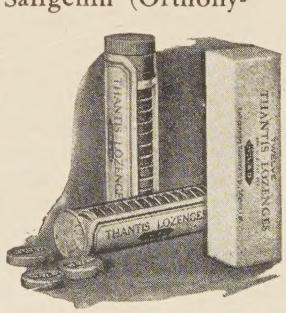

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Open Forum

Trek To the Amazon

HYMAN ZUCKERMAN
Office of the Coordinator of Inter-American Affairs
Washington, D.C.

The year 1941 is memorable in northern Brazil for two reasons. One is the severe drought which left a trail of scorched earth, ruined farmers, and hungry families. The other reason is the impact of global war upon this vast area, with its "bulge" jutting into the Atlantic toward Africa, its tropical forests holding big potential supplies of rubber, vegetable oils and other war-essential commodities. From a military viewpoint, the Brazilian "bulge" was one of the most important strategic areas in the Western Hemisphere. Northern Brazil offered, moreover, the best overland route for air traffic bound to the fighting fronts of northern Africa, the Mediterranean, Asia. Economically, this relatively undeveloped area, two-thirds the size of the United States, increased in importance to the United Nations as the loss of tropical-grown supplies outside the Western Hemisphere turned attention to Latin American sources of rubber, vegetable oils, fibers. The attack on Pearl Harbor, bringing war to the gates of the Americas, had momentous repercussions in northern Brazil, as well as the United States. There followed the most exciting period northern Brazil had experienced since the collapse of the Amazon rubber boom after the first world war. World War II brought to northern Brazil a tremendous boom in air traffic, along with a new impulse to the development of its latent resources.

Between the war-stimulated economic development and drought there was direct connection. The drought centered in the State of Ceara, close to the outermost reaches of the "bulge", contrasting with the heavy tropical rains of the Amazon River country, farther north toward the equator. Many farmers in Ceara, vainly waiting for rain, looked to the Amazon country. The sprawling Amazon region is one of the greatest areas of tropical forest in the world. It is thinly inhabited for the most part. Transportation to the few towns and cities along the rivers is relatively slow travel by river boat, although the extension of air transport has brought fast connection with the outside world to such Amazon centers as Belem, at the mouth; Mananus, a thousand miles upstream from the Atlantic, and Iquitos, Peru, more than two thousand miles inland. The Amazon country is nature in the raw, untouched by civilization, save in a few spots. It is right up against the equator. But at least the Amazon country has what Ceara did not have—rain. The Amazon country has rain to spare.

Moreover, the Amazon country has wild rubber trees, uncounted millions of them. It has countless millions of other trees which yield valuable nuts, vegetable oils, hardwoods. It has possibilities for the production of tropical-grown fibers, such as jutes. Because of these potentials, the Amazon country after Pearl Harbor took on enhanced economic importance, both for Brazil and for the United Nations. The United States, in the Far East, has lost major sources of rubber, fibers, mahogany, vegetable oils. The Amazon, together with other areas of Latin America, was the most promising source for replacement of these lost supplies. The catch was what the Amazon lacked for this urgently-needed development—transportation, manpower, food, health and sanitation services.

The Amazon country, therefore, obviously had need of migrants who were shaking off the dust of drought-hit Ceara and adjacent areas to find greener territory. For green landscape alone, nothing could beat the Amazon and its green sweep of tropical forest. But it takes a devastating drought, such as baked the "bulge" area in 1941, to make the Cearnse think of the Amazon as greener pastures. In the forty thousand square miles of the State of Ceara live an estimated population of two million persons. The huge state of Amazonas in 1940 has less than five hundred thousand people, by authoritative estimate, in an area of seven hundred thirty-one thousand square miles, nearly three times the size of Texas. These statistics sum up the manpower problem which linked drought in Ceara with economic development in the Amazon country after Pearl Harbor.

The forests were not the sole reason for the increased demand for labor. Along the coast, running north from Fortaleza, capital of Ceara, were stopover points on the air route across the South Atlantic by way of the Brazilian "bulge". Belem, gateway to the Amazon country, needed additional labor for malaria control works, for building construction. The population of northern Brazil had grown with the influx of thousands of military personnel, American and Brazilian. Defense activity generated demand for civilian workers.

So the stage was set for one of the many migrations put in motion by global war—the trek to the Amazon. Gathering momentum in 1942 and 1943, it continued in 1944. By mid-1944, some 26,000 workers and their families had migrated along well-defined migration routes to such centers as Belem and Manaus for re-distribution to labor-shortage points.

Migration to the Amazon from drought striken areas is not a new story in Brazil. It has happened before. What is unusual about the latest migration is the organization which went into the care of migrants, for protection against disease, hunger, the elements. The old migrations into the Amazon, when Amazon rubber was king of the market, was much like a gold rush, with every man for himself, on his own, except for what security and protection he could get by teaming up with his friends and his fellow workers or migrants. Matched against the Amazon and its formidable jungles, man indeed had a struggle to survive disease, hunger, heat.

Stories of these hardships survived the heyday of Amazon rubber to complicate the manpower problem in the development of Amazon resources in recent years. Brazil has long-range aspirations for the economic future of the Amazon country. These plans include the settlement of colonists who will become self-sustaining and contribute to the expansion of production for local use and for trade with the outside world. The tropical products of northern Brazil, from cocoa to rubber and vegetable oils, particularly complement the United States market. Development of the vast Amazon basin and adjacent areas, therefore, has significance for inter-American trade. Urgent wartime need for the tropical products of northern Brazil draws attention to the commercial possibilities of this undeveloped region.

There are two streams of migration in the current phase—the long-range movement of colonists into the Amazon by Brazil's National Department of Immigration and the emergency movement of workers into the

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Amazon to gather rubber and for wartime defense works. These streams merged to become after Pearl Harbor the largest migration into the Amazon in years. Although many of the emergency migrants may not remain, the overall effects of the wartime speeding of the movement doubtless will contribute to the long-range development of the huge Amazon country.

Brazil, in tackling this development job, understands thoroughly the tremendous obstacles. Even if adequate transportation were available, large contingents of colonists could not be transplanted hurriedly into the primitive Amazon country. In the long run, the realization in greater measure of the economic promise of the Amazon, and adjacent undeveloped regions, will require years of preparation in the improvement of food supplies and health and sanitation services, aside from the extension of transportation facilities. But Brazil, with the cooperation of the United States, has accelerated this work for wartime requirements.

Drought-hit Ceara has furnished many of the additional migrants who have moved north to Belem, then up the Amazon and its tributaries to rubber-producing points, as well as additional workers for the building of air bases, for malaria control works and similar wartime construction projects. Workers also were recruited from many places outside the State of Ceara. However, manpower is the basic need in other sections of Brazil which are undergoing faster development, especially in the farming and industrial areas of southern Brazil. Southern Brazil, for instance, has one of the fastest-growing industrial centers in the Western Hemisphere, Sao Paulo. Thus it was difficult to recruit quickly additional labor for the Amazon, despite the attractions of migration camps, free transportation, medical care, food.

Brazil set up special organizations, best known by their alphabetical abbreviations, to handle the migration problems, health and sanitation services, and food supply. Among these organizations are SESP, organized as a channel for cooperation with the United States in providing special health and sanitation services; SEMTA, which handled the recruitment of workers; SAVA, which took care of migrants when they reached the Amazon, and CAETA, a coordinating agency. SESP operations go beyond the Amazon Valley and include the Rio Doce Valley, source of strategic minerals. The United States, through the Office of the Coordinator of Inter-American Affairs, sent doctors, sanitary engineers and agricultural specialists to work with Brazilians on the health and food supply problems. I was assigned to the migration work as a medical officer, charged with the task of aiding in the health and sanitation work at the migration camps.

Ten migration camps, with capacity ranging from four hundred to three thousand persons, were organized along the two thousand five hundred-mile route from Fortaleza, the capital of Ceara, to Manaus, the capital of Amazonas. At these camps, the sick were treated, migrants were examined for infections to prevent the spread of infectious diseases. Every arrival at the collection centers was vaccinated against smallpox, inoculated against typhoid and tetanus. A physical record was made and sent along with each migrant. At every camp along the route the migrant was given a physical examination and his card was stamped, allowing him to continue his travels. At Belem, a final phys-

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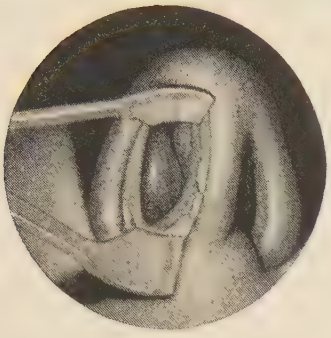
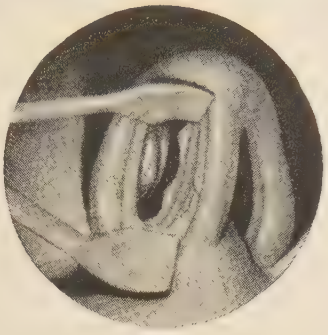
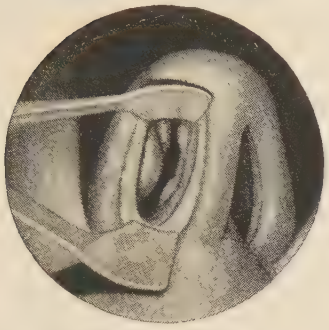


1:52 P. M. Inferior and middle turbinates are highly engorged and in contact with the septum. The airway is completely blocked.

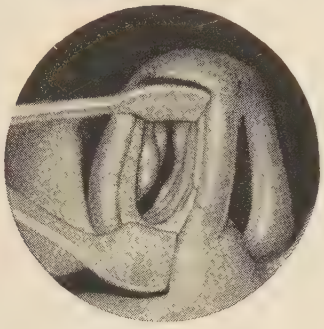


2:01 P. M. Maximum shrinkage has been obtained 9 minutes after two inhalations from Benzedrine Inhaler. The airway is open.

LASTING FOR HOURS



3:15 P. M. Airway is still open. Benzedrine Inhaler produces a shrinkage equal to, or greater than, that of ephedrine.



4:00 P. M. Two hours after treatment, shrinkage persists. Benzedrine Inhaler shrinkage lasts 17% longer than that of ephedrine.

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Arch. Otolaryng., 39:109-123, 1944.

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ical inspection was made. If it showed satisfactory results, the migrant proceeded to points where his labor was required.

During the height of the submarine campaign in Western Hemisphere waters, and the shipping shortage, the main route of the migration ran from Fortaleza overland by way of Sobral, Tiangua, Terezina, Caxias, Coroats and Sao Luiz, then by sea to Belem for the long trips by boat up the Amazon and its tributaries. After a physical checkup in Fortaleza, migrants travelled in groups of 35 in trucks to Terezina, 500 miles distant, stopping en route at camps at Sobral and Tiangua.

Medical problems along the route were various. The greatest problem was malnutrition among children and infants. Underfed children were hospitalized. They improved with care and proper feeding and the death rate among the children dropped rapidly. Brazilian doctors and nurses did effective work among migratory families. Altogether, at the various camps, were assigned thirty-five Brazilian doctors and one hundred twenty nurses. Practical male nurses, known as *guardas medicadores,* accompanied groups of migrants on the river boats. At the main collecting stations dentists were available for extraction of teeth and minor dental care.

Each camp had its own medical problems. One camp, for instance, was situated near a town where typhoid fever was endemic. The main problem there was the water. So two water squads were organized to bring water into the camp from a nearby stream. The water was treated with aluminum sulphate, boiled in large containers, then stored in locked barrels for use as needed. As a result, during a period of six months, not a single case of typhoid was reported at the camp.

From Terezina, migrants travelled by train to Sao Luiz, at seaboard. The train trip averaged thirty hours. On a stopover at Coroata, a medical post, physical inspections were made once more. At Belem, yellow fever innoculations were given by the Brazilian migration service. When the submarine menace subsided, migrants moved directly by boat from Fortaleza to Belem or Manaus and some stopover camps along the land route were closed.

Like an army on the march, the Amazon-bound workers carried basic sleeping and eating equipment, as well as clothing. The basic equipment consisted of a hammock, cooking utensils, an extra pair of trousers, shaving equipment and antimalarial tablets, rated essential to combat malaria, the most serious menace to health and human vigor in the hot and humid Amazon lowlands. SESP, on its own, has begun an extensive program of malaria control and organization of medical posts to support the economic development of the Valley. But regular doses of the antimalaria tablets were considered as important as eating.

The practical results of these precautions were evident in an extremely low death rate among the male migrants, in the improvement of the health of undernourished children, in the absence of major epidemics. The most serious outbreaks among the migrants were waves of grippe which incapacitated workers for a few days, slowed their journey to the Amazon.

Moreover, much valuable data were accumulated from the physical check-up and observation of health problems among the migrants. This information will be useful in the long-range health and sanitation work Brazil is doing in connection with economic develop-

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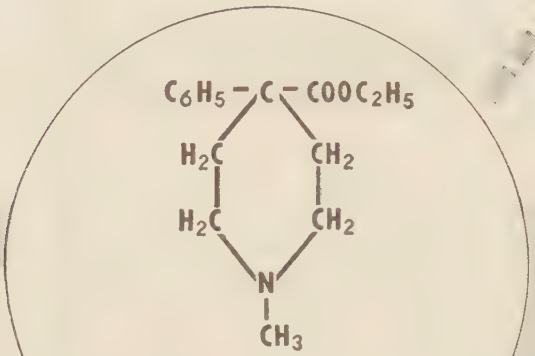

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ment in northern Brazil and in the Rio Doce Valley, which holds one of the greatest stores of mineral wealth in the Western Hemisphere. An interesting sidelight of the medical activities in the migration was dental observation of an area in the State of Rio Grande de Norte, where the "bulge" sticks farthest out into the Atlantic toward Africa. The inhabitants of the area have extraordinary teeth. In fact, some of us who saw teeth which would make Hollywood stars envious, were convinced these people must have the most perfect teeth in the world. The explanation was not obvious, unless it could be accounted for by substances from the local soil or water. Anyway, the phenomenon of the beautiful teeth in the vicinity of one of the migration camps was called to the attention of medical authorities for further investigation.

In 1944, the rains came. The drought area took on a greener hue. The Amazon, and its green wealth, seemed less inviting to dried-out farmers looking for lusher fields. The old cycle of drought and rain, with its human migrations, had not changed much. This pattern of climate and life has been reenacted many times in many places. It has its counterpart in the United States in the migration out of the dust bowl before the war. Eventually the rains came in the dust bowl, too.

But Brazil's plan for colonization of the Amazon, for greater development of its resources, is a long-range program. It is not worked out on the unpredictable factors of rain and drought in other sections of the country. It aims to make the Amazon more attractive to man, by calling in the aid of science, the machine, improved agriculture. Doctors, nurses, airplane pilots, agricultural technicians, organizers are the vanguard of the colonization movement. The emergency migration after Pearl Harbor to obtain additional workers for wartime needs is an episode in the larger story of the trek to the Amazon. And, like the larger story, it illustrates how the Amazon-bound worker and colonist is receiving the benefits of progress in applying the principles of preventive and tropical medicine. The huge valley presents perhaps the greatest challenge to tropical medicine. Among those who have studied the Amazon region, there is wide difference of opinion as to its future for human habitation. But most of those who are wise in the ways of the Amazon country, I am sure, would agree that the extended use of practical preventive and therapeutic measures can help greatly in making it more attractive to the colonist.

Medical Kits for Schools in Europe

Medicines sufficient for the needs of one million school children are being sent by the American Junior Red Cross to schools in Yugoslavia, Greece, and Belgium. The medicines in question are contained in kits now being purchased at a cost of $87,500.

Each kit will contain approximately thirty different standard medical items, such as aspirin, boric acid, soap and gauze. The kits are designed to serve four hundred children and are distributed to schools in the countries in question through the Joint Commission of the International Red Cross Committee. Under this arrangement kits may be sent to occupied areas as well as those that have been liberated. A total of twenty-five hundred kits is being shipped, one thousand to Yugoslavia, one thousand to Greece, and five hundred to Belgium. These kits are being paid for from the Junior Red Cross National Children's Fund.

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1 Kling, D. H., Sashin, D., and Spanbock, J.: J. Lab. & Clin. Med. 24:1241, 1939.
*Trade-Mark Reg. U. S. Pat. Off.
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The Tragedy of Princess Henriette of England

A Medical Problem

THE HONOURABLE WILLIAM RENWICK RIDDELL
Toronto, Canada

The tragic fate of Henry IV, done to death by the dagger of Ravaillac, and that of his son-in-law, King Charles I of England by the axe of the official headsman, are commonplaces of history about which no mystery clings. The equally tragic death of Henriette Anne, daughter of the one and granddaughter of the other, contains a problem, the answer to which has been generally given by historians and annalists in one sense, but in all probability, it should be answered in the opposite. Did she die of poison?

Living with her mother, the widowed Queen of King Charles I, in the Convent of Chaillot, recommending herself to King Louis XIV by her wit and beauty, she was when barely sixteen, married to the King's brother Philippe d'Orleans. The husband was more than suspected of being a homosexualist—he was in the habit of donning women's clothes, and his relations with the Chevalier de Lorraine were somewhat notorious. They didn't hesitate to be seen dancing as man and woman. His suspicions as to the relations between his young wife and his brother, the King, which he communicated to his mother, Anne of Austria, were quite certainly unfounded. The King, indeed, may have been *capable du tout,* but the girl-wife was pure. The King undoubtedly made use of her in at least one great purpose of state. In May, 1670, he entrusted her with the mission, successfully accomplished, to induce her brother, Charles II, to withdraw from the alliance with Holland and Sweden, which Louis rightly thought dangerous to France.

On her return from this mission to Dover where she met Charles, she took up her residence at St. Cloud. The month of June was excessively hot and she not only suffered from the fatigues of travel, but also from the heat. Against the advice of Yvetin, her prince physician, she took a bath in the Seine. Next morning she felt worse but insisted on walking in the park till a late hour of the night, according to her usual custom. Next day, her suffering was more severe, and she complained of great pain in the side. One of her attendant ladies gave her a cup of chicory tea[1] as was her constant practice. Hardly had she drunk it, when she cried out with a terrible pain in the side. She soon became livid and was carried to bed. Here she tossed from side to side, complaining of great pain. Her Physician-in-Ordinary, Esprit, who was called in all haste, diagnosed colic and directed the usual treatment. But this was ineffective, the malady increased, and before the end of half-an-hour, the princess began to cry that she felt terrible pain in the pit of the stomach and that she had been poisoned[2]. She insisted on being given an antidote. Her husband ordered that oil should be given her and the rest of the chicory tea given to a dog to make sure of its innocence and to assure the patient. She continued to complain of pain "not in the bowels but in the stomach and up to the neck". Her lips and cheeks were swollen, and though she protested that pain in the abdomen was not severe, she cried out in anguish if that part was touched, while the pain in the sides made her constantly place her hands there.

Her physicians found nothing else to administer but the familiar orvièt an, powdered vipers, oil and emetic drugs. These caused her to vomit without allaying the pain, and she was put in a state of prostration which was taken for repose. She was unable longer to continue her cries, but it was evident that she looked upon herself as dying. For some inexplicable reason, or for none, the physicians never thought to feel her pulse, but on the direction of her husband, one of her attendant-ladies[3] did so, and at once called out in alarm that she had no pulse and her extremities were absolutely cold. Esprit, seeing the dismay thus caused, said that this condition was usual in colic and that he would answer for the patient.

While she received the priest, the Curé de Saint-Cloud, without any exhibition of emotion, the pain continued to increase and she insisted on being bled—she was "smothering". She was bled in the arm and foot but without effect except temporary soothing. She insisted to Yvetin in the presence of the other doctor, Velot, that he should treat her for poisoning. Whether the Prince Physician believed it or not, he assured the husband that there was no danger and he would answer for her life. This the husband repeated to the wife but in vain: she repeated that she was dying; she grew worse, and complained of pain in the throat and stomach. An enema which they had ordered having had no effect, the doctors Esprit and Yvetin were called in again. She showed death in her face and she said she would be dead in the morning. Some soup given her only increased her sufferings. The King came and then the very physicians who had been minimizing the seriousness of her condition changed their attitude and said that the coldness of the extremities and the want of pulse were symptomatic of gangrene, and advised that the Princess should receive the last sacraments. The King himself proposed some thirty medicines, as to which the doctors had nothing to say. She was confessed, but physicians and apothecaries continued to torture her. She was given a medicine made of senna and syrup of peach flowers; she had enema after enema for the "bile being constantly stirred had gone too high and it was necessary to bring it down." All in vain; nine hours after the draught of chicory tea, the Princess died on the last day of June, 1670.

An autopsy was had. On the first incision, near the stomach, a horrible odor manifested itself and the walls fell; the incision being continued to below the umbilicus, the intestines appeared all turgid, some, including the ileum, of a bad color, livid and approaching the gangrenous. The part of the intestines near the gallbladder was tinged with bile; below the intestines was spread a yellowish-white liquid which all the physicians said was sanious and bilious; but no ulcer was found, nothing to account for it, "so that it was apparently a biliary and chylic serosity which was extravasted and fallen out of the intestines by the impetuosity of the bile which was in fermentation". The liver was very yellow and ashy, the color of a hind's belly, with flabby substance "so that one would wonder how she could live with such a bad liver." The spleen

[1]Chicory (or succory), Cichorium intybus, in our day generally used, the roots alone, in adulterating coffee, was at this time made into a favorite beverage; in some European countries it is still so used.

[2]She seems at first to have thought the poisoning accidental; she cried, "they have surely used the wrong bottle".

[3]Madame de Gamache, who had given her the chicory tea; one of the few ladies of rank of the time of whom apparently no "stories" are extant.

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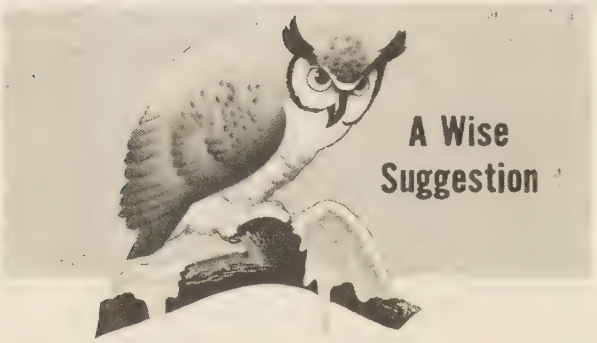

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was in fair condition, as were the kidneys, the left one being slightly discolored. The lungs were found engored with black blood which appeared heated and burned. The left one adhered to the sides and when opened, the upper part was found sanious. Externally, the stomach appeared in very good condition, its substance normally firm and white. Opened its full length from above, there was found a quantity of bile, glairy and high-colored, which colored all the contents. The œsophagus was filled from the botton to the mouth with the same yellow humor, as were the inferior orifice and duodenum. These were even gorged with it so that it could be gathered by spoonfuls. The gallbladder was filled and much enlarged by bile. The engorgement of stomach and esophagus and the swelling of lips and cheeks were attributed to straining in efforts to vomit.

The medical men reported: "Madame died of cholera morbus[4], the causes of which are well known and the effect uniform", adding, "there is no reason to suspect poison, slow or active."

Although the postmortem was held to satisfy the English Ambassador and in the presence of an English physician and an English surgeon, the opinion of the English persisted that the unfortunate princess was poisoned, and it is difficult to believe otherwise[5].

Virus Type Equine Encephalomyelitis

All three types of equine encephalomyelitis viruses known to be present in the Western Hemisphere are capable of producing fatal encephalitis in man, according to Colonel Raymond Randall, of the Army Veterinary School at Washington, D.C. In a paper presented at the annual meeting of the Association of Military Surgeons, Colonel Randall pointed out that the relatively high mortality rate of the human disease emphasizes the importance of this horse disease from the public health viewpoint.

In 1941 more than three thousand human cases were reported in the United States and Canada. Most of them occurred in North Dakota, South Dakota, Nebraska and Canada; North Dakota having the highest incidence with 1,080 cases and ninety-six deaths. Cases were also reported from California and Washington. The mortality rate among the human cases varied in different areas from eight to twenty percent, adult male farm workers having the highest incidence. This is in contrast with the Eastern type infection which in the outbreaks thus far recorded was predominantly a disease of children and had a mortality rate of approximately seventy-five percent. In many instances during the midwestern epidemic of 1941 the Western type encephalomyelitis virus was isolated and it appears that the St. Louis encephalitis virus played a minor rôle in the outbreak.

The evidence is ample, Colonel Randall said, that equine encephalomyelitis is transmitted by insects, particularly mosquitoes, and its control involves antimosquito measures. Horses and mules may be protected against the disease by the annual administration of chick tissue vaccines. A vaccine suitable for human use has developed in the Army Veterinary School, Colonel Randall said, and can be made available if indications for its use should develop.

[4]"Cholera morbus" was the name long given to any severe pain of the abdomen, including "miserere", perityphlitis (which King Edward VII suffered from), and appendicitis (*ploro referens*).

[5]Most of the facts in this paper are to be found in an extremely interesting little French publication: Docteur G. Legué: *Medicines et Empoisonneurs au XVIIe Siécle;* Paris, 1896.

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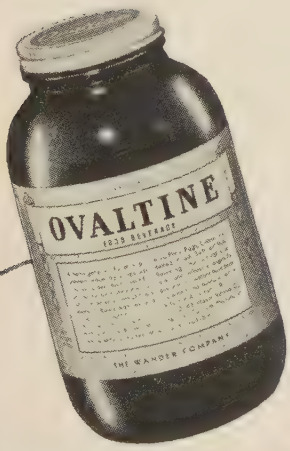

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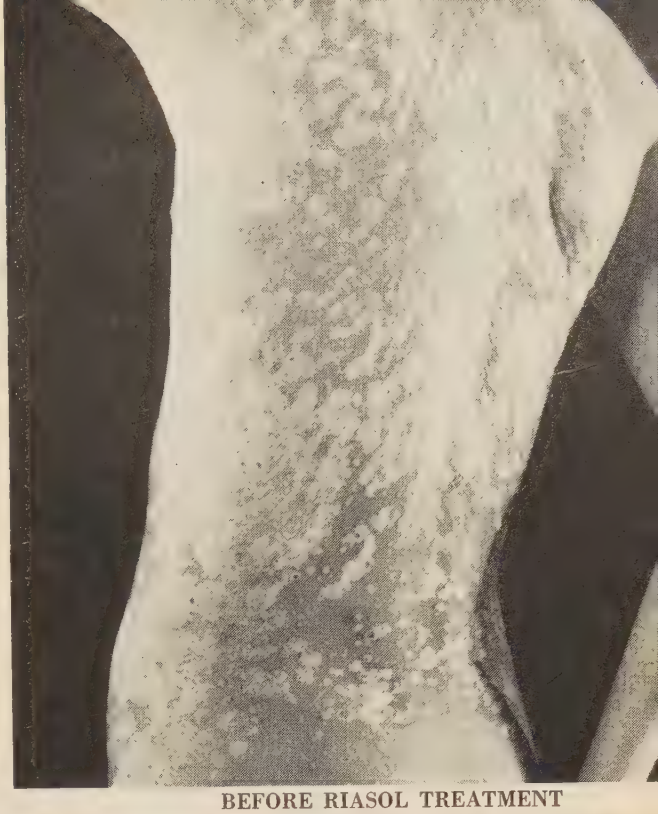

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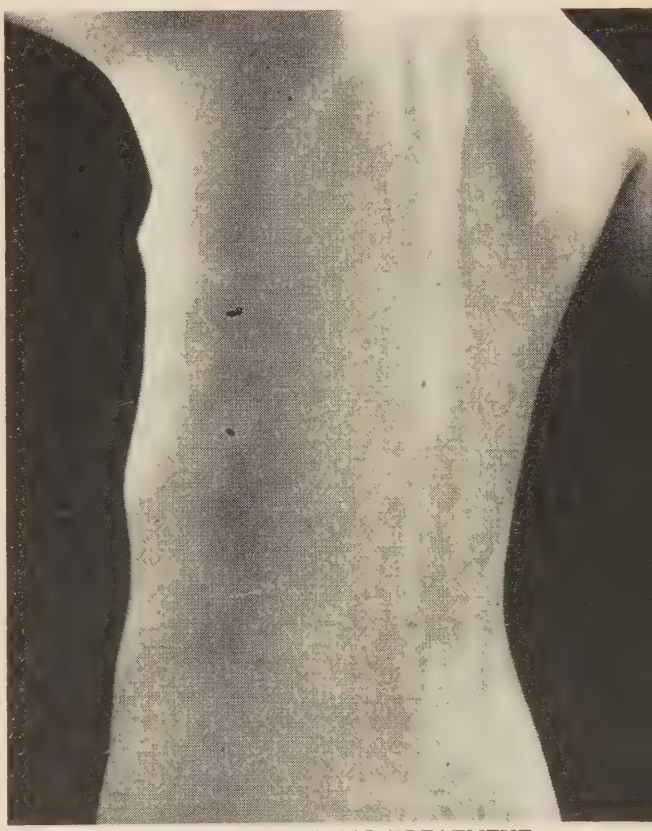

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Neuropsychiatry in Relation to General Medicine and Surgery

Speaking on the relationships of neuropyschiatry to general medicine and surgery in the Army, Colonel William C. Menninger, M.C., chief consultant in neuropsychiatry, told the Association of Military Surgeons, at the recent annual meeting, held in New York, that every medical officer, regardless of his training or specialty, is confronted with a considerable number of psychiatric problems. As a guide to those who have not specialized in the psychiatric field, he elaborated on ten points to be observed and avoided. These were: 1. The failure adequately or correctly to assess the relative importance of the psychological along with the physical factors in disease (assuming the illness to be entirely organic or entirely emotional); 2, failure to take an adequate history of the emotional factors involved; 3, failure to establish rapport with a patient; 4, failure to recognize the importance of the particular emotional factors in Army patients (it may be the situation that is difficult rather than the man who is weak); 5, overexamination (physical), which may make the patient think he has a baffling illness or has foiled the physician; 6, overhospitalization (which causes the patient overconcern); 7, overemphasis on treatment of a physical nature (which convinces patient that he has an organic difficulty); 8, mistaking organic for functional illness; 9, use of scientific nomenclature in diagnosis without sufficient explanation to patient; 10, false evaluation of statistics. Efficiency of the unit, not a paper record, is the Medical Department's goal.

War Surgery

A new concept of Army surgery—aimed at full restoration of health rather than mere saving of life—is revolutionizing the management of wounds in France and Italy, according to a report prepared by Colonel Edward D. Churchill, M.C., surgical consultant of the Mediterranean theater of operations. The new techniques, grouped under the term "reparative surgery," are designed to prevent infection before it is established or cut it short at the period of its inception. Colonel Churchill summarized the developments as follows:

In this war there have been two quite different approaches to the application of chemotherapeutic agents to military surgery. The first would utilize these agents to permit delay in wound surgery and minimize the incision of tissue destroyed by the missile. The second employs chemotherapy to extend the scope of surgery and achieve a perfection in results previously considered impossible. To reiterate the axiom that penicillin is not a substitute for surgery is not enough. Every surgeon must learn that chemotherapy opens new and startling possibilities in wound management. To realize fully the potentialities of reparative surgery requires the introduction of a new concept in the organization of military surgery. Four to ten days is the "golden period" during which time wounds must be closed, and other procedures to prevent or abort infection must be carried out.

Colonel Churchill concludes that failure to take cognizance of the potentialities of early reparative surgery at the base in future plans and operations will be as glaring an omission as a failure to plan for the removal of the wounded from the field of battle.

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Army Methods of Malaria Control

The Army has made great progress in the control of its No. 1 disease hazard, malaria, according to Brigadier General James S. Simmons, USA, Chief of the Preventive Medicine Service, who described Army methods of malaria control in an address delivered at the annual meeting of the Military Surgeons of America held in New York recently.

General Simmons said that in the Army, the problem has two aspects, control in base areas and protection of troops in combat. The first is primarily mosquito control, and specially trained personnel are required to produce effective results. The malaria control organization in the Army Medical Department includes medical officers trained in malariology, and small survey and control units headed by parasitologists, entomologists and sanitary engineers.

The second aspect, protection of troops in forward and combat areas, depends upon individual measures of protection in addition to mosquito control, according to General Simmons, and strict malaria discipline must be established and enforced. Soldiers must be drilled in the use of repellents, sleeping nets, protective clothing and insecticide sprays in the same way they are trained to use combat weapons.

Concerning the third aspect, the possible spread of malaria in this country by returning soldiers, General Simmons said that members of the armed forces who have had malaria will be given sufficient treatment to render them free from demonstrable parasites before they are discharged. In addition, men who have had malaria or served in malarial regions are advised to seek prompt medical attention and have a blood smear for malarial parasites in case of illness with fever.

However, he added, prevention of malaria in this country, as elsewhere, depends essentially upon the control of the malaria carrying mosquito.

New Hospital Car

On November 13th, the first of a new type hospital car for use in the United States was opened for inspection in Washington, D.C.

These new unit-type cars are not converted pullmans, but are designed and built as hospital cars. They are ten feet longer, are air-conditioned, accommodate thirty-eight patients and attendant personnel. Each includes two rows of triple-tiered beds, two compartments with three beds each, a stainless steel kitchen equipped with refrigeration, ice cream cabinet and coal range; a receiving room with four-foot side doors for loading and unloading litter patients; two roomettes, each with toilet and shower, for the medical staff or seriously ill patients; and a baggage compartment. The car also carries a modern pharmacy unit and sterilizing equipment and in case of emergency either the receiving room or one of the roomettes can be converted quickly into an operating room. The Glennon-type, steel-frame beds are adjustable and unoccupied center bunks can be dropped to provide seating accommodations for ambulatory patients.

Six more of these cars were put in operation in November; eighteen will be put in operation in December and seventy-five during January, February and March of next year. This brings the total to one hundred, in addition to the one hundred and twenty converted hospital cars now in use.

Our Contributors

Peter Hampton, B.A., M.A., Winnipeg, Canada, is assistant professor of psychology, Brandon College, University of Manitoba; assistant in psychology, University of Manitoba; a member of the Testing Bureau of the University of Manitoba and is a representative for Winnipeg of Opinion Surveys, Ltd., of Montreal. He was formerly affiliated with the University Hospital, University of Minnesota. He is the author of sixty published papers and articles on psychology. For recreation he enjoys good music, skating and swimming.

* * *

Otto Meyer, M.D., New York, N.Y., was graduated from Rostock University, Germany in 1921. He limits his practice to phlebology. He has published about sixty scientific papers on the subject of latent phlebitis (especially jugular) and its relationship to septicemia, rheumatic diseases, poliomyelitis, and allergy.

* * *

Solomon R. Kagan, M.D., Roxbury, Mass., was graduated from the University of Dorpat Faculty of Medicine, Russia, in 1917, and was formerly a member of the staff of the Jewish Memorial Hospital in Roxbury. He is the author of a number of books, including *Jewish Contributions to Medicine in America,* and has written numerous articles on medical, historical, bibliographical and literary subjects, published in the Russian, German, Hebrew, Yiddish, and English languages.

* * *

Abraham O. Wilensky, M.D., New York, N.Y., was graduated from the College of Physicians and Surgeons, Columbia University, New York, in 1907. He is a member of the American Medical Association, a Fellow of the American College of Surgeons, a member of the American Association of Thoracic Surgery, and a consultant in several hospitals in general and abdominal surgery.

* * *

Hyman Zuckerman, M.D., was born in Poland, and was graduated from New York University, N.Y., the American University of Beirut, Syria, and the Royal University of Pisa, Italy, where he received the degree of Doctor of Medicine. From July 1937 to January 1938, he spent a rotating internship in the Regina Elena Hospital, Trieste, Italy. In February 1938, he was given reciprocity rights for the practice of medicine in Britain and the British Empire. He served his internship at the Greenpoint Hospital in Brooklyn. He has attended the Medical Field Service School, Carlisle Barracks, Pennsylvania; the School of Tropical Medicine, Army Medical Center, Washington, D.C.; and the School of Malaria Survey and Control at Wilson Dam, Alabama. In November, 1942, Dr. Zuckerman reported for duty with the Division of Health and Sanitation, Office of the Coordinator of Inter-American Affairs. Since then, Dr. Zuckerman has served as a medical officer in Brazil, specifically the Amazon, and in 1943 he was promoted to a Major in the Army Medical Corps.

* * *

Herman E. Hilleboe, M.D., Washington, D.C., was graduated from the University of Minnesota in 1931. Dr. Hilleboe is the medical director and chief of the Tuberculosis Control Division of the United States Public Health Service, and is also a member of the Minnesota State Medical Association.

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[1] Diseases of the Skin: Sutton & Sutton, 1939, p. 99

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MEDICAL RECORD

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VOL. 157, No. 12 DECEMBER 1944 WHOLE No. 2743

THE PREVENTION OF OCCUPATIONAL MALADJUSTMENTS AS A RAISON D'ETRE OF CONSULTING PSYCHOLOGY*

PETER J. HAMPTON
Oxford, Ohio

While the basic purpose of consulting psychology is the satisfactory adjustment or readjustment of the individual to an environment, a secondary purpose, which has gained much emphasis during the war years, is that of preventing occupational maladjustments.

At no time in our history has there been a greater occupational shift than is experienced at the present time. Motivated by pecuniary incentives and patriotic appeals, many persons, apparently well adjusted to their occupational environments, are leaving their positions for less demanding but better paying jobs. This is especially the case with those persons engaged in that large area of occupational endeavor commonly referred to as the white collar level of jobs.

Trapped between rising prices and lowered incomes, some twenty million Americans belonging to the white collar class of occupations are becoming restless. A good many have already left their occupations; others are in the process of leaving. It is to these people that the consulting psychologist must look to prevent impending vocational maladjustments.

Initial steps in this direction have already been taken at Western College. Persons employed in white collar positions who are contemplating a change of occupation are invited to come to the Psychological Testing Bureau for a thorough psychometric examination. No attempt is made to advise the subject for or against leaving his occupation. He is simply given a diagnostic appraisal of his present occupational adjustment. Treatment is up to the subject himself. The facts are put before him and it is he who decides what to do about them.

Our experience at the Bureau has been that subjects after undergoing a psychological appraisal and finding that they are well adjusted to their present occupational environment gain in self-confidence. Some of these subjects have decided to forego the temptation to leave their positions for higher paying jobs for which they are less well suited. Others have left their occupations to seek higher salaries or to answer the government's call to undertake work essential to the war effort, but with a firm resolve to return to their former positions when the war emergency has ended. Those, on the other hand, who have found themselves poorly adjusted to their occupational environments have discovered through the appraisal what their human assets are, and have capitalized upon them by directing their vocational aims to those occupations for which by nature and nurture they are best fitted.

The experiments of preventing occupational maladjustments, carried on at Western College, are proving successful. It is too early to present conclusive statistics on the success of the plan in its wider ramifications, since follow-up studies have not as yet been made on more than a few cases. However, judging on the basis of the facts at hand, the success of the undertaking seems to be assured. The following case history illustrates the psychological appraisal which serves as the core for the prevention of occupational maladjustment as practiced at Western College.

Clinical Data

The clinical data which furnish the background for this case history are culled from information supplied by the subject in an Individual Record Form and in aids to the vocational interview, Record Form B.

The subject was born in Russia, of Dutch parentage, on October 18, 1909. He went to Canada in 1925, moved to the United States in 1929, and in 1932 went back to Canada. He has been in the United States several times since 1932, but for short periods only, attending summer school at the University of Minnesota. At present he is professor of psychology at a mid-western Canadian university, on leave of absence attending the Graduate School at the University of Minnesota.

There has never been any economic want in his family. His father is a merchant (now retired), who at one time was well to do. His mother (deceased) was an accomplished musician. Both parents had grade school education plus special training, the father obtaining a business and the mother a musical education.

When the subject was five years old his mother died of pneumonia. His only brother, two years his junior, died of peritonitis at the age of twenty-eight. He was a hotelman at the time in western Ontario. The subject's father married again—this time into a business family. Of this second marriage there are two boys and three girls. The occupational choices of the girls are nursing, commercial art, and music; of the boys, mechanics and (the youngest boy is only ten years old and has not as yet made a vocational choice) probably agronomy. The family is Baptist.

*From Western College Studies in Psychology, No. 24.

The subject's education was obtained at the expense of much moving around from school to school. He attended four public schools, five high schools, and four colleges and universities. H.D., as I shall call him, came to Canada with the equivalent of eighth-grade standing. After some private instruction in English he was admitted to ninth grade in high school. He matriculated in 1930.

He next took his freshman year at T. College, and his sophomore year at the University of Minnesota. Then came a break of four years during which time he was employed by a newspaper, a chain grocery store, and a soft drink bottler and distributor. Resuming his education in 1936 at the University of Ohio, he took his honors B.A. degree in 1938, and his M.A. degree in 1940. Since 1940 he has been working toward his Ph.D. degree in psychology both at the University of Ohio and the University of Michigan. Since 1937 he has also been on the staff of the University of Ohio, first as reader in philosophy, then as assistant in psychology and philosophy, and now as instructor in psychology.

His work history is rather extensive. Since he always worked part-time while attending school and during summers, he has held many different jobs. At one time or another he has been farm laborer, janitor, librarian, reporter, tutor, translator, dishwasher, waiter, cook, clerk, cashier, trucksalesman, typist, teacher, free-lance writer, public lecturer, etc.

His health history is not unusual. He has had typhoid fever, mumps, measles, whooping cough, and blood poisoning. At present he is in good health. He is five feet, eight inches tall, and weighs about 154 pounds. His build is solid, his vision and hearing are acute, has no decayed teeth and no skin blemishes. Some of his expressed interests include fishing, hunting, hiking, swimming, going to movies, reading, and attending theatres and concerts. He takes a delight in books on psychology (scientific) and biography. Some of the magazines he reads include professional journals of psychology.

The present vocational choice was made after a certain degree of fluctuation of interests. At first he wanted to be a linguist. This desire was due to hero-worship of one of his relatives who was a college professor and a linguist, speaking some thirty-two different languages.

In college he decided that philology was not really interesting enough for him to devote his life to it; teaching seemed more interesting. The desire to teach was put aside for the time being, however, when he had a chance to become a reporter and then the editor of a college paper. The desire to go into journalism, which resulted, lost out when he met a fascinating professor of philosophy, and for the next two years he dabbled in philosophy. Realizing, finally, that it would be next to impossible to make a living from philosophy, he finally decided upon psychology, a subject in which he had been interested for a good many years, as his life's work. He has not regretted the choice he made. His present ambition of teaching, lecturing and writing about psychology is giving full expression to all his four ambitions as stated above.

There are two sources of information on H.D.'s scholastic ability, school marks and intelligence test results.

Test Analysis and Interpretation

He matriculated from T. Academy with an average of ninety-two percent and a ninety-six percentile high school rank. His average standing as a freshman was B; as a sophomore B plus, and as a junior and senior A. He had the highest aggregate standing of any student in the fifth year (honors course) of his undergraduate course. He obtained the University of Ohio gold medal for highest rank, one hundred percentile rank. In his M.A. work he had an A average, and in his Ph.D. work he has a B plus average thus far.

How are the B averages in the freshman, sophomore, and Ph.D. years to be explained? During the freshman year H.D. carried on too much extracurricular work. During his sophomore year he devoted too much time to part-time jobs. The B's in these two years are to be accounted for on the basis of diversion of effort.

The B plus average in the Ph.D. year is due to the operation of another factor—keenness of competition. H.D. is beginning to overreach himself as far as scholastic ability is concerned. The competition is getting more difficult, and as a result there is less chance for him to make the marks he formerly made. He has just about reached his ceiling as far as scholastic ability is concerned; the rest is up to application, perseverance, motivation, and hard work.

The test results give us the following picture of H.D.'s measured scholastic ability: Otis I.Q. 127; Army Alpha I.Q. 128; Pressey Senior Classification 88th percentile.

The subject's work history shows not a single dismissal. In the occupation for which he is still preparing himself, namely, professorial teaching, he has made slow but steady progress. Starting as a reader in philosophy, H.D., was promoted to class assistant in psychology, assistant in psychology, and instructor in psychology. With these advancements have come corresponding increases in salary. He has published six papers, eighteen book reviews, and forty-four articles in about twenty-three different periodicals from professional journals to daily metropolitan newspapers. His extension work up until the present has been limited to two series of public lectures on psychology delivered to the Y.M.H.A. and the Y.M.C.A.

Educational achievements include the University of Ohio gold medal for highest standing in the fifth year honors arts course, Isbister scholarship, service scholarships, University of Ohio research grant, and membership in the Canadian and American Psychological Associations, and Opinion Surveys.

There are indications that H.D. has special aptitudes in musical, clerical, and mechanical fields. On the Seashore test he obtained a percentile of 60 for pitch, 90 for rhythm, and 100 for tonal memory. On the Minnesota Vocational Test for Clerical Workers he obtained a percentile of 91 for number and 96 for names. Percentiles on the Minnesota Spatial Relations, the Likert-Quasha Revision Paper Form Board, the Minnesota Manual Dexterity, and the O'Connor Finger Dexterity tests were, respectively, 99, 100, 96, and 94. Using past achievement as a criterion of aptitude, it would seem that H.D. also has special aptitudes for writing and teaching.

H.D. evidences a definite mathematical disability. This conclusion is supported by results on the Michigan Vocabulary test, Form A, on which he obtained

a percentile of only 2 for the mathematics sub-test. Low percentiles are also obtained on the physical and biological sciences sub-tests on the same form of the Michigan Vocabulary test. There are no language difficulties, no reading disabilities, and no physical defects.

The expressed occupational interests as gauged by the Individual Record Form are in order of preference: professorial teaching, free-lance writing, concert pianist, physician, and personal work. On the basis of the Individual Counseling Record, H.D.'s occupational alternatives are, when expressed in order of importance, social worker, writer, teacher, salesman, and editor. His measured interests, according to the Kuder Preference Record, and again in order of significance, are: literary, musical, social service, science, artistic, persuasive and computational. The percentiles for these are, respectively, 81, 75, 70, 44, 43, and 20. The measured interests on the Strong Vocational Interest Blank are, in order of their significance, as follows: social service, business contacts with people, business detail work, and verbal or linguistic work. In the first two of these occupational fields, the subject has a primary pattern of interests, in the second two a secondary pattern. He has favorable attitudes towards his occupation, teaching. He made a percentile of 72 on the Hoppock Job Satisfaction blank and a score of 9.1 on the Remmers Attitude Toward Any Occupation scale.

Judging from the Bell Adjustment Inventory, H.D. seems to be fairly well adjusted. The following are the scores he obtained in the different fields of adjustment: home 3, good health 3, good social 2, very aggressive; emotional 3, good; occupational 3, good; total 13, good. His percentiles for the social behavior and social preference inventories were 72 and 88, respectively. The Bernreuter personality inventory indicates that the subject is emotionally well adjusted, is fairly self-sufficient, ambivert, slightly dominant, not self-conscious, and social.

A complete medical examination indicates that H.D. is in A1 condition physically, with a negative Wassermann, a slightly positive Mentoux, with little reaction to the Schick and chickenpox tests. His chest and lungs are normal, temperature is also normal; blood pressure slightly below normal, vision 20/20, hearing good, no skin blemishes, no carious teeth, and no indications of any disease.

H.D. comes from a merchant home. According to Taussig's occupational scale, he would thus be classed as falling on level 2, the semi-professional level of occupations. On a six unit occupational rating scale, H.D. would get a rating of two, which is good.

Diagnosis

A review of the test data shows that the subject has had difficulties in only two of the six major problem areas, namely, in the educational and occupational fields. There are no discernible problems in the personal and emotional, financial, health, and family background areas.

The problem that arose in the educational area was due in part to specific sub-matter disabilities, and in part to a too high aspiration level or over-ambition. He did not place enough emphasis in his undergraduate years on the natural and mathematical sciences, with the result that he now finds himself facing a gap in those departments of his knowledge. The low percentiles which he obtained on the physical, biological, and mathematical sub-tests of the Michigan Vocabulary test fully bears this out.

The subject's scholastic record and the I.Q.s and percentiles which he obtained on different intelligence tests, indicate that he has superior intelligence as compared to an adult norm group—adults in general. When comparison is made with a highly selected group of graduate students, however, his intelligence rating falls below the average.

Since the occupation which H.D. has chosen for his life's work will demand that he compete with many persons who are more intelligent than he is, it would seem that, on the basis of intelligence as a requirement for occupational success in professorial teaching, he is overstepping himself. Fortunately intelligence is only one factor—although an important one—among many others that lead to occupational success. Thus, if the subject has other characteristics or traits that will counteract the deficiency here or at least establish a balance with regard to occupational success as compared with other competitors of his, he may still be successful in his chosen occupation of professorial teaching. A review of the test material indicates that there are such balancing characteristics in H.D.'s make-up. The two most important ones are the following:

First, as far as measured interests are concerned, H.D. has a primary interest pattern in social service activities on the Strong Vocational Interest Blank, a field into which professorial teaching obviously falls. The Kuder Preference Record also designates social service as one of the subject's measured interests. Again, on the Individual Counseling Record, social service comes first on the list of occupational possibilities for the subject. His secondary vocational ambition of writing is also a genuine measured interest. It gets first place in the Kuder Preference Record, second place in the Individual Counseling Record, and fourth place in the Strong Vocational Interest Blank.

Second, the personality of H.D. is obviously well suited for teaching. The Bell Adjustment Inventory classifies him as a well-adjusted individual in all of the adjustment areas measured. Results on the Social Behavior and Social Preference scales support the evidence for teaching as a good occupational possibility, already given elsewhere. Furthermore, H.D.'s attitudes as measured by the Hoppock Job Satisfaction Blank and the Remmers Attitude Scale toward any Occupation give further evidence for teaching.

Treatment and Counseling

The treatment in this case will consist of having the subject make up, as far as possible, subject-matter deficiencies. Counseling will consist in pointing out to him that he will have to lower or at least not raise his aspiration level any further. In view of the test results, any further raising of the aspiration level may result in disaster. The present aspiration level, while high, judging on the basis of H.D.'s native intelligence, can be satisfied by industrious application, strong motivation and unflinching perseverance.

Something should also be said for other occupational possibilities. As far as the subject's aptitude measurements indicate, he would do well in the clerical, musical, and mechanical fields. His measured interests would support occupational possibilities in the fields

of business contacts with people, business detail work, verbal or linguistic work, and music, in addition to social service. H.D.'s personality is adaptable to success in any of these fields.

Matching special aptitudes with measured interests and personality characteristics, it would seem that good occupational alternatives for H.D. would be occupations in the following fields: business contacts with people, business detail work, verbal or linguistic work, and music. The mechanical field, while a good possibility as far as measured aptitudes are concerned, fails to get supporting interest.

Prognosis

Prediction of any kind is tentative and depends for its value to a large extent upon an environment which continues to be favorable to the development of a subject's possibilities. With this fact in mind, it can be said with a fair degree of certainty that H.D. will be moderately successful as a professorial teacher, provided he does not aspire to the most exalted position in the professorial teaching profession.

But, human nature being what it is, he probably will. If he does, he will meet with failure. If he is content to devote himself to social service on a lower rung of professorial teaching, he will meet with success. At any rate, the answer to the stated problem with which this case history was opened, namely, whether H.D. had made the correct vocational choice, is in the affirmative. All things taken into consideration, H.D. probably chose an occupation in a field in which his aptitudes and abilities, both inherent and acquired, can best be put to use.

Follow-up

Since the test data on H.D. have only recently been compiled, it is too early at this time for a follow-up. But looking back over four years of college teaching, it seems that the follow-up, when it is made, will be a favorable one, showing progress not only in the removal of subject-matter deficiencies, but also in the establishment of a proper aspiration level assuring success.

WESTERN COLLEGE.

A NEW TREATMENT FOR FLATFOOT AND OTHER COMMON FOOT DISABILITIES

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A flat foot is considered a symptom of inherited weakness of connective tissue. A flat foot *per se* does not have to cause discomfort; only an inflamed flat foot is painful.

Years of experience in the treatment of flat feet have convinced me (1) that latent thrombophlebitis in the deep veins of the leg and of the plantar veins plays the deciding rôle in the causation of a painful flat foot.

Thrombosis of the planter veins was often found by Neumann (2) in pathological examinations. In thirty-two cases of bilateral flat feet he found thrombosis in the plantar veins in ninety-two percent. In two cases of bilateral pronounced flat feet he did not find any signs of thrombosis. Neumann points out that the origin of thrombosis is often in the plantar veins and progresses from there to the deep veins of the calf.

In an inflamed flat foot we find edema in the dorsal part of the foot and in the malleolar region. This edema seems to be caused by impairment of venous drainage in the inflamed tibial veins.

Levin and Bucy (3) have described the pathological findings in a case of proliferative endophlebitis and came to the conclusion that the inflammatory swelling of the endothelium interferes with the venous drainage.

It is generally known that blockage in the venous drainage causes an increase in venous pressure and consequently increased transudation in distal parts of the venous blockage.

On the basis of animal experiments McMaster and Hudack (4) came to the conclusion that transudation through the small venules is more important for the rapid development of edema of the skin as a result of increased venous pressure than is transudation through the capillaries.

Pemberton (5) calls attention to the fact that arthritis in the foot joints is often associated with flat feet.

The return of the venous blood from the foot area is usually sluggish on account of hydrostatic circumstances. Next to the *vis a tergo* and the negative pressure in the chest, muscular contractions (walking) are the most important factor in the return of the venous

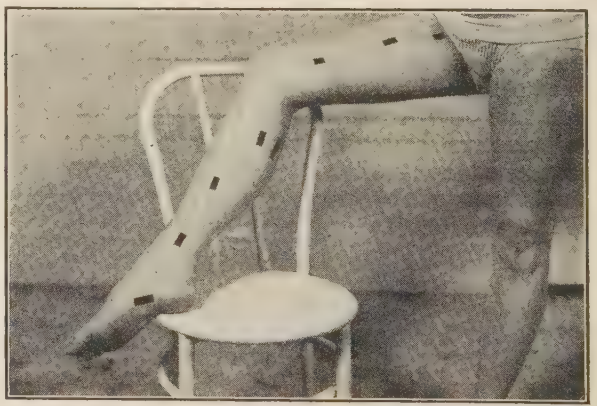

FIG. 1.—Meyer's pressure points for phlebitis. (The plantar vein point was described by Payr.)

blood from the foot region. We see in bloodletting the best demonstration of the importance of muscular contraction. In bloodletting from the arm the opening and closing of the fist causes contractions of the forearm muscles and forces the venous blood to the needle. It is obvious that muscular contraction during walking plays an important rôle in the venous return. On the other hand, standing occupations favor circulatory sluggishness in the lower extremities. For this reason we find a great deal of foot disability in persons who have to stand a long time on their feet.

Inflammatory phlebostenosis in proximal veins is a fundamental factor in the causation of arthritis in distal joints. The impairment of the venous return through inflamed swollen endothelia causes venous congestion which produces a tissue with weakened resistance. Therefore, it is imperative to decongest tissues with venous hyperemia and restore a normal circulation in inflamed joints. In the production of painful symptoms in the foot region endophlebitis of the tibial veins is of causal importance.

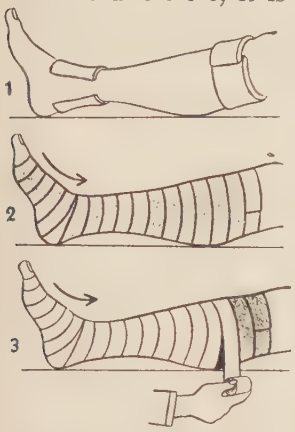

Fig. 2.—The pressure bandage. 1. Protect instep, Achilles tendon and region directly below knee with gauze spread with vaseline. 2. Apply contura bandage loosely. 3. Apply plasto bandage over contura bandage with firm but nonconstricting pressure. (Courtesy Medical Fabrics Inc., Paterson 1, New Jersey)

The diagnosis of latent phlebitis is easy with the help of Meyer's pressure points (Fig. 1).

The most effective therapy for these conditions is the pressure bandage (contura plus plasto) (Fig. 2). The patient should walk a great deal with the pressure bandages in order to intensify contraction of the leg and foot muscles. The pressure bandage produces an automassage during walking.

Usually the patient feels relief immediately after the application of the pressure bandages. The bandages have to be changed twice a week, as they become loose as a result of decrease of inflammatory swelling. The treatment has to be continued until the deep veins can be palpated without pain.

Obvious focal infections (pulpless teeth, infected tonsils) must be removed as they "feed" latent infections in the veins. The fact that oral infections spread into the jugular veins has been proved pathologically by A. Dietrich (6) in tonsillogenic infections, by Colby Hall (7) in pharyngeal infections, and by H. Siegmund (8) in dentogenic infections.

I have used this method successfully in treating painful flat feet, arthritis of the foot region, acute attacks of gout, Morton's neuralgia, and periostitis in the foot region.

The metatarsophalangeal joint of the large toe is one of the most frequently affected joints in arthritic patients. Arthritis in this joint makes walking extremely painful, and I always include this joint, when inflamed, in the pressure bandage.

It is amazing how gouty arthritis in the big toe joint is relieved promptly by application of pressure bandages which include the painful big toe joint, the foot, and the leg up to the knee. Without colchicum medication the patient is promptly relieved from the excruciating pain. The pressure bandage reduces the edema considerably. The more edema is present, the oftener the pressure bandage has to be renewed, as a loosened bandage is of no value.

In acute attacks of gout the superficial veins are slightly dilated. This symptom indicates venous congestion. I have never treated a case of gout in the big toe joints without a diagnosis of latent phlebitis in the tibial veins. Phlebitis and venous thrombosis have often been described as complications of gout. In my opinion the vein affections in gout are a causal factor. The fact that in gout phlebitis is latent and becomes manifest only during an attack, explains perhaps this misconception.

Summary

Inflammatory phlebostenosis in the tibial veins causes congestion of the foot area and subsequently a *locus minoris resistentiæ* in this region.

The venous congestion produces pain in the affected area, and especially inflammation of the joints.

Treatment consists of the application of pressure bandages which include the foot and the leg up to the knee, with instructions to walk a great deal.

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200 WEST FIFTY-FOURTH STREET.

OUTLOOK FOR TUBERCULOSIS CONTROL

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The control of tuberculosis was one of the first activities in public health in which the cooperation of the public and professional people led to substantial progress in controlling the disease by the sheer power of public education.

Early successes, however, were destined to encounter stubborn resistance as the disease retreated into strongholds less easy to discover and breach by ordinary methods of attack. The inevitable result will be a lag in the downward trend of morbidity and mortality unless some new development occurs which stirs the public interest and enables us to push ahead again.

Recent scientific advances have awakened public interest in tuberculosis control. New technical developments in x ray equipment now make it possible to apply this essential tool to millions of the population, instead of only thousands, by means of small film mass radiography, which is a simple, effective

and cheap method of discovering tuberculosis early.

The war also has directed our attention to tuberculosis control because of the known increase in tuberculosis in war-torn European countries. Even in this country, all of the conditions favorable to the spread of the disease are present—crowding, fatigue, overwork, increased exposure, and mass migration of working people of low economic status, among whom the incidence of the disease is known to be high.

Although there is not yet any nation-wide increase in tuberculosis mortality in the United States, indications in certain parts of the country are that such a rise may soon become apparent. The stage is set then for a reversal of the favorable downward trend of mortality in this country unless something drastic is done to avert this threat.

During the past two years the Public Health Service, working in cooperation with the state and local health departments and tuberculosis associations, has carried on pilot demonstrations in mass case-finding with small film photofluorography. The great significance of the findings has been the fact that sixty-four percent of the cases discovered in our surveys are in the minimal stage of the disease when chances for recovery are excellent with proper care. This is in sharp contrast with the fact that only ten percent of persons coming to clinics or physicians for the first time for care are in the minimal stage of the disease.

We are under no illusion, however, that the discovery of one or a thousand or a million cases of tuberculosis will alter the course of the disease in this country unless the newly-discovered cases are given care and treatment sufficient to arrest the disease, or at least prevent its spread to others.

The interrelationship of poverty, ignorance and disease is nowhere more clearly demonstrated than in the prevalence of tuberculosis. The greatest havoc is worked among low-income groups. The non-white population is at the bottom of the economic ladder. No plan to rid America of tuberculosis can overlook the close alliance of poverty and disease in these underprivileged groups of our population.

Among the large numbers of cases revealed by mass radiography, there are more than one hundred and thirty thousand young men and women rejected by the examining and induction stations of the armed forces. Already many veterans of World War II have been discharged because of tuberculosis. These two groups of young people in the principal wage-earning age groups merit special attention in nation-wide planning for tuberculosis control.

Now is the time to attack tuberculosis in every part of the country, with the objective in view not only to control the disease but actually to eradicate it. The foundation for such an enterprise has been laid by the National Tuberculosis Association by its sustained and successful program of public health education. The job can be done if official and voluntary agencies will pool their resources on a local level and make a frontal attack on a broad front.

To achieve the final objective, our immediate aims must be definite and specific. Here is what must be done:

1. Chest x ray examination for the entire population, concentrating first on the vulnerable groups and the family contacts of newly-discovered cases. This does not exclude the use of pre-x ray tuberculin testing among selected groups with low infection rates.

2. Follow-up of every case discovered in x ray examination, in order to insure clinical diagnosis and proper treatment. This would include supervision by physicians in private offices or clinics, assisted by public health nurses; sanatorium care; protective supervision after discharge, and rehabilitation when indicated.

3. Periodic examination, including chest x ray, of persons with inactive disease.

4. Prompt treatment for active cases which can make a good recovery.

5. Strict isolation of open cases to prevent further spread of the disease.

6. Intensified health education activities among the general population, patients and their families. This can well be done by local tuberculosis associations.

7. Expanded research in tuberculosis and public health methods.

8. Financial aid to the tuberculous breadwinner.

Only if this nation recognizes tuberculosis in all its aspects as of national public concern, as cause of suffering and death, and treats its medically, socially and economically, shall we be enabled to conquer it. If it be so recognized, the outlook for control is encouraging and with hard work and joint effort, eradication is possible within our generation.

BETHESDA STATION.

Tuberculosis in the Aged

C. L. Harrell (*Virginia Med. Month.,* Nov. 1944) says that tuberculosis has for many years been considered a disease of youth, affecting mainly those between the ages of fifteen and forty-five years, but he believes the age of expectancy has been greatly increased, as many more patients beyond the age of fifty are now found to have tuberculosis than formerly. He reports that in his private practice, during a period of twenty months (January 1, 1942—September 1943) ninety-nine new patients were found to have tuberculosis, and of these, twenty-seven were fifty years of age or older, eleven beyond the ages of fifty and sixty, and thirteen above sixty. In an effort to determine whether others were having a similar experience, he found that thirty patients beyond fifty years of age were reported as having tuberculosis by the Anti-Tuberculosis League Clinic of Norfolk. The Tidewater Memorial Hospital reported that out of three hundred and ninety admissions, eighty patients were over fifty years of age. The Chicago Municipal Tuberculosis Sanatorium admitted 1,154 patients in 1940; and of this number one hundred and fifteen were over fifty years of age. The National Jewish Hospital, Denver, admitted four patients over fifty years of age in 1915, while in 1940 they admitted twenty-one. In 1915 the State Sanatorium at Catawba admitted three hundred and sixty patients, of whom twelve were over fifty years of age; in 1940 they admitted five hundred and fifty-five, with sixty-two over fifty years of age. In 1942 the Virginia State Department of Health reported four hundred and ninety-four deaths from tuberculosis in patients over fifty years of age.

In the death registration area in the United States, the rate for 1915 was twenty-one percent in patients over fifty years of age; in 1940 it had risen to 34.6.

Symposium on Internal Medicine

THE ROLE OF CHEMOTHERAPY IN THE MODERN TREATMENT OF ACUTE HEMATOGENOUS OSTEOMYELITIS

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The modern treatment of acute hematogenous osteomyelitis depends upon the recognition of the fact that this disease comprises two essential parts; 1, an acute bacterial blood infection (bacteremia), and 2, a local secondary lesion in the bone (acute hematogenous osteomyelitis).

Stage of Acute Bacteriemia

The physical facts of an acute bacteriemia are well known. It comprises a local bacteria-incited inflammatory (primary) lesion somewhere upon the actual or potential surface of the body (skin, mucous membranes, external ear, ocular conjunctiva, etc.) from which living bacteria are continuously being shed into the freely circulating blood stream and that the latter can be demonstrated by proper cultural methods.

At the onset of the illness any demonstrable organisms in the general blood stream are derived from the original primary lesion (furuncle, carbuncle, etc.) to which the bone lesion is secondary, and not from any secondary focus in the bone or elsewhere. At subsequent periods, any new or recrudescent bacteriemia may be due to a continuation of the original, or of some undemonstrable primary lesion (e.g., in the alimentary canal), or may be due to the focus of acute osteomyelitis and/or to some other metastatic focus or neighboring or distal complication.

In much the largest proportion of the cases, and ordinarily, the numbers of living bacteria shed into the blood stream from the local primary lesion are relatively and actually small, so that concomitantly with their appearance in the freely circulating blood stream, they are continuously being destroyed by the natural antibodies. This process of supply and destruction is a continuous bilateral phenomenon until the local source of supply (the primary lesion) undergoes spontaneous healing or is operatively removed. Under other ordinary conditions, and when the constantly added supply is not excessive, the effectiveness of the natural antibacterial forces is amply sufficient to increasingly counteract the bacteriemia concomitantly with its production and the latter disappears finally without any other extraneous aid.

There have been any number of instances of this kind in my own and, I am sure, in everyone else's experience. The following is a typical example: A young boy of six years was admitted with an acute focus in the upper end of the tibia and the blood cultivation showed twelve colonies of Staphylococcus aureus in each cubic centimeter of blood cultivated. A second blood culture made forty-eight hours later was sterile.

In other cases the effectiveness of the endogenous antibacterial forces it not sufficient and the bacteriemia continues in about the same intensity as heretofore. In the absence of any active primary lesion, this must be assumed to be due to a further increasing development of the local bone lesion, or possibly, to some other metastatic focus. In other words, this indicates that the source of supply is relatively greater than the powers of bacterial destruction and in these cases extraneous help is necessary for the control and stoppage of the growth of bacteria and for this purpose chemotherapy is valuable. Fortunately, chemotherapy succeeds in many of the cases; unfortunately, in some, it does not. Chemotherapy breaks down because the drug is incapable of reaching and coming into intimate enough contact and in sufficient concentration with the source of supply (an infected thrombus somewhere in the confines of the bone lesion); then it, too, needs further additional extraneous help which in many cases is available by surgical methods (removal of an extraosseous thrombosed vein or ligation of the main vein) and in an equal, or greater number is unavailable because the lesion is inaccessible to surgical reach (e.g., vertebral osteomyelitis).

This is well illustrated by the following case:

A young boy was admitted with a focus in the upper end of the tibia, metastatic to a furuncle, which by this time was entirely healed and could not possibly be related to the continuing bacteriemia. The latter was of the grade corresponding to twenty to forty colonies per cubic centimeter of blood cultivated. The maximum amount of chemotherapy was used and several of the available drugs (sulfanilamide and sulfathiazole) were unsuccessfully alternated when no therapeutic effect occurred. Nevertheless, the bacteriemia and the local and general symptoms of the blood infection remained unaltered and continued.

This phase of this particular experience illustrated the breakdown of chemotherapy even when used at its maximum and under the best clinical conditions. The reason and the mechanism of the breakdown was shown in the second phase of the illness.

Several days later a thrombosed saphenous vein was discovered in anatomical relation with the tibial focus. This was thoroughly excised. The bacteriemia immediately disappeared with a corresponding improvement in all of the local and general symptoms.

The breakdown and ineffectiveness of the chemotherapy was due to the presence of an active thrombophlebitis within the confines of the bone focus with which the drug was unable to come into intimate physical contact in order to exercise its bacteriostatic effect. While the drug was in contact with the proximal end of the thrombophlebitis (the unimportant end), it was entirely out of reach of the distal end of the thrombophlebitis in contact with the freely circulating blood stream from which end (the important end) the infected clot was able to discharge bacteria into

the blood stream continuously. The bacteriemia, therefore, continued uninfluenced by the chemotherapy until the thrombophlebitis process extended outside of the bone and was recognizable in the thrombosed saphenous vein. Then excision of the vein and ligature of the proximal end provided the necessary extraneous help for the control of the bacteriemia. Compare this with the common course of events in mastoiditis with sinus thrombosis and ligature with or without excision of the jugular vein.

This is one of the few cases in which the presence of a demonstrable extraosseous thrombophlebitis make it certain that the bacteriemia was derived from the secondary (metastatic) focus of acute osteomyelitis.

Such an experience is not repeated very often except in otological practice. The usual observation does not succeed in uncovering any spreading of the intraosseous phlebitis (*vide infra* under local lesion) to an extraosseous position in an accessible visible and/or palpable vein. Nor is it possible in many localizations to find the vein, by the ligature of which the bacteriemia could be adequately controlled (cf., the control of the bacteriemia in mastoiditis with sinus thrombosis by ligature of the jugular vein). Or, if such a vein did exist, it might be surgically inaccessible as in the vertebral, sacral and pelvic cases; or it might be accessible surgically with great difficulty and with great danger to life (as in the cavernous sinus cases complicating accessory sinus disease). In these difficult cases, chemotherapy must be persisted in either alone or possibly in conjunction with the aid of some anticoagulant (e.g., heparin). Cases are beginning to accumulate in which there has been eventual success.

Less commonly the numbers of demonstrable organisms in the circulating blood are relatively large (of a grade corresponding to one hundred or more colonies of bacteria per cubic centimeter of blood cultivated). Or the numbers of demonstrable organisms begin to increase and to approach or surpass this grade. This may occur at the very onset of the illness when it should be taken to indicate that the primary lesion is in a state of increasing activity especially in relation to its venous thrombosis, and that showers of bacterial emboli are being discharged into the circulation with the formation, possibly, of one or multiple metastatic foci. Or, it may occur at any subsequent period when the primary lesion is already healed: here the bacteriemia must be referred to the local bone lesion or to any other metastatic focus which may be present. Under such conditions intensive chemotherapy has its most important field and usefulness.

At any stage of the illness, early or late, cases occur in which there is abundant clinical evidence of the highest grade and most fulminant types of general infection. Commonly this indicates an antemortem phase. The accumulation of excessively large numbers of organisms in the blood stream as shown by the numbers of colonies in the culture plates indicates that in these there must be additional multiplication of the organisms within the blood stream. These extreme grades of bacteriemia correspond to the complete breakdown and ineffectiveness of the naturally available destructive antibacterial substances in the body. Up to this time chemotherapy has not been successful in these bad cases and I believe that most of the nonsuccesses with fatal results probably belong in this group. Any kind of extraneous help including operation and even amputation of a limb is ineffective in these cases (*vide infra* under local lesion for the reasons of this).

Metastatic Lesions of the Bacteriemia

The modern conception of the metastatic lesions of any bacteriemia includes the possibility of any number of them not only in the skeletal system but, in addition, in any of the soft parts (muscle, fascial and cellular spaces), in the viscera (heart, lungs, kidneys, etc.), and/or in the hollow spaces (pleural, peritoneal, subdural, etc.); and that the localizations may be a single or a multiple phenomenon either in one, or in more than one of these systems.

If exhibited early enough, successful chemotherapy may, by helping to eliminate living bacteria from the circulation, prevent entirely, or curtail the formation of the metastatic lesions. This has occurred in my experience, and must surely have occurred in that of other men. This is certainly one of the best effects of chemotherapy.

I have had several experiences in which it seemed as if a secondary lesion was about to form as evidenced by a local symptomatology. But the symptoms retrogressed and disappeared so rapidly as to make it difficult to discount the effect of the chemotherapy entirely. There was a tibia case with transient symptoms in the humerus; there was an ulna case with transient symptoms in the opposite radius; and so on. There have been several other cases with mild, temporary bacteriemia in which no localizing symptoms occurred.

Metastatic lesions sometimes occur after chemotherapy has been used in the early stages of the infection. While not conclusive, the available information seems to show that this is due to too early discontinuation of the chemotherapy. In a fully formed metastatic lesion, chemotherapy has not, up to the present writing, produced any good effect.

The Bone Lesion

The bone lesion (i.e., the acute osteomyelitis) is only one of the possible metastatic manifestations of the bacteriemia and results from the localization of the viable bacteria in the freely circulating blood stream at some point in the bone vascular system due to local compulsory causes (temporary faulty mechanics of the local circulation, capture of an infected thrombus or of a clump of bacteria, etc.). The site of the acute osteomyelitis is frequently determined by some known or unrecognized local trauma.

The essential nature of the anatomical lesion which develops at the given bone is a blockage of the circulation (arterial in a large nutrient trunk or venous in the intraosseous distributing vascular plexus) followed by a thromboarteritic or thrombophlebitic process at the point of localization. The embolus is either a clump of bacteria or a thromboembolus which, under the circumstances, usually carries with it virulent viable and growing bacteria. The physical effects of these two factors—infection and blockage of the circulation—contribute almost entirely to the pathogenetic mechanism of the further development of the local lesion and determine the final physical status of the bone area involved in the process.

Infection is usually the factor of lesser importance at the site of the bone lesion. Its effect is always en-

hanced by the presence of any preceding local trauma. In any event, the possible total local effect is suppuration and the resulting abscess localizes itself extraosseously (abscess in the muscular or fascial planes), or intraosseously as a bone abscess. Many times, however, and this seems to be not well understood among the profession, this factor is a negligible one: the minimal suppuration is of no clinical importance, no operative incision is necessary, and spontaneous healing occurs. In the soft tissue suppurations no permanent effect or defect remains. In the bone suppurations a similar result occurs; or, more frequently, a sterile cavity remains in the bone which shows no clinical evidence of its presence except its accidental radiographic discovery. Commonly, too, it may assume a clinical importance months or years later as a Brodie abscess.

In other cases the suppuration assumes a clinical importance inasmuch as fever and other signs of intoxication persist. Chemotherapy does not exercise any good effect in well founded suppurations and surgical incision and drainage is necessary and should be carried out at the proper moment without delay.

In the cases without clinically important suppuration, chemotherapy is effective upon the local lesion in direct proportion with its ability to reach the bacteria therein, either by direct approach through the normal blood supply or through any collateral circulatory path. This is possible in many cases and accounts for the good effect of chemotherapy upon the local lesion. However, the bacteriostatic effect is only possible upon the surface of the bacteria infested area and not within its depths. So that while the surface is being sterilized, the bacteria within the depths of the area are not affected and they continue to grow undisturbed until they penetrate to the surface. This accounts for the temporary good effect which chemotherapy often produces with later recrudescence of the clinical signs of infection in the local area, unless the chemotherapy is kept up for a relatively long time.

When chemotherapy is being used it sometimes happens that the original drug used is ineffective upon the local lesion but that the use of another drug of this group is subsequently successful. I believe that when the second drug used exhibits such an effective action it is entirely due to the fact that sufficient collateral circulation has become established in the thrombosed area for the drug to fulfill the conditions just mentioned.

In the area of the osteomyelitis the factor of most importance is the degree of interruption of the vascular supply and the consequent deprivation of nourishment from the affected part of, or the whole bone. Under certain conditions this will be at a minimum (as in the distal area of distribution of the intraosseous vascular plexus); in others it will be at a maximum (as in the main trunk or major divisions of the main nutrient vessel). In between, all grades of disturbance occur. Under any condition, the final effect depends entirely upon the availability and efficiency of any collateral circulation.

This is the most important item of the entire process. If the collateral circulation is efficient and sufficient, the permanent effect of the mechanical blockage is nil and no bone necrosis occurs. The extent of any permanent bone necrosis depends upon the inefficiency and insufficiency of the collateral ciculation. This effect is entirely mechanical and is not influenced by any accompanying infection. Nor can it be expected that any form of chemotherapy can influence this aspect of the disease in any way.

Local Complications of Acute Osteomyelitis

Complicating factors of any acute osteomyelitis occur in the neighboring soft parts (extraosseous abscesses in the soft parts), in a neighboring joint (suppurative of nonsuppurative arthritis), in an adjoining hollow cavity (empyema, pericarditis, etc.), and/or in a serous space (peritonitis, meningitis).

Chemotherapy has lately proved of value in some of these complications. The results in meningitis have been excellent. There are some reports of its good effect in empyema. Until and whenever such good effects have been proved in the other forms of accompanying local complications, the usual forms of surgical therapy apply. As a matter of circumspection, chemotherapy should be pushed in these cases also at the same time.

Cause of Death in Acute Hematogenous Osteomyelitis

The cause of death in acute hematogenous osteomyelitis is not necessarily confined to the area of osteomyelitis, or to its accompanying bacteriemia. Any sufficiently important metastatic lesion elsewhere, or any similar neighboring, or distal complication may determine a fatality, 1, because of its own accompanying toxic effects (various forms of pulmonary consolidation, pulmonary abscesses, etc.); 2, because of dangerous mechanical effects (heart tamponade in serous or suppurative pericarditis); or 3, because of destructive effects upon vital areas (brain abscess); etc. Frequently, unfortunately, chemotherapy has no clinical effect upon these complicating lesions or upon their pathological functional consequences.

Chemotherapy in Chronic Osteomyelitis

In long-standing cases of osteomyelitis, the available data do not indicate that chemotherapy has a decisive effect. In chronic osteomyelitis the cause for the nonhealing is usually of a mechanical nature plus a certain amount of infection. The surface infection is of no importance and can be adequately controlled by the local application of a chemotherapeutic drug. The important infective foci are situated deeply within the cancelli in the old and new formed bone and are beyond any local reach of chemotherapy. Nor are they usually within reach by the general administration of chemotherapy.

In long-standing cases, the removal of all causes which mechanically hinder the healing, is necessary before healing can be accomplished. The procedures follow the well known surgical teachings and should be carried out minutely. A fairly radical removal of all infected areas in the bone is also necessary. When both of these criteria have been accomplished, chemotherapy is useful for the purpose of keeping the wound surfaces sterile. In any event, at the present writing, chemotherapy has only a subsidiary place and does not take the place of good surgery, in old standing chronic cases of osteomyelitis.

Reference

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12 EAST EIGHTY-SEVENTH STREET.

THE MEDICAL PROBLEM OF NEPHRITIS

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Acute Nephritis

Case I.—Mr. K., aged forty-three, complained of dyspnea on exertion, badly swollen ankles for a period of one week, inability to lie down to sleep, and a gain of about thirty pounds in weight in the last three months. He had not had any acute illness, but had indulged in alcohol rather freely. Physical examination revealed an acutely ill, dysneic patient, with swollen face, pendulous abdomen, but no fluid wave, and pitting edema of the legs. His blood pressure varied from 190/130 to 165/115. Laboratory tests revealed the following: complete blood count normal; urine showed albumin four plus, many hyaline casts, several red blood cells per hpf, nonprotein nitrogen 28.

A diet of milk and water up to 1500 cc. was advised and later a salt free low protein basic diet. Digitalis was given. The patient lost twenty-five pounds and was discharged with no edema of extremities in eight days. Since then he has lost another twenty pounds, and is on a basic diet. There is no longer albumin in the urine, and no dyspnea. He is no longer on digitalis. A moderate hypertension still exists.

Pyonephritis

Case II.—Mrs. F., aged sixty. The symptoms presented were gross blood in the urine for four days, temperature and chills, frequency of urination, and weakness. She stated that she had felt poorly for the last two months. Several years previously she was treated for an acute pyelitis with apparent recovery. A hysterectomy and appendectomy had been performed twenty years ago, and an ovarian abscess was removed thirty years ago.

Physical examination revealed a normal blood pressure, and all other findings were not remarkable. Examination of the kidneys, ureters and bladder showed dilated, distorted, slightly ragged calyces and pelvises of both kidneys. Both kidneys were enlarged and thought to be polycystic. Both ureters were dilated and tortuous. Further laboratory tests showed the following: red blood cells, 3,500,000; hemoglobin, 55 percent; white blood cells, 32,000; polymorphonuclears, 90 percent. The urine showed 4 plus albumin. Both kidneys showed pus cells too numerous to count, plus gram-negative bacteria. Nonprotein nitrogen 105 mgms., creatinin 3.6, and CO_2 combining power 27.

Course: A right nephrectomy was performed on the second day, and an infected polycystic kidney was removed. The patient died on the second postoperative day, and an autopsy revealed that the other kidney was also polycystic and badly infected.

Congenital Polycystic Kidney

Case III.—Mr. H., aged forty-five years. The patient's past history showed that eight years ago he had a hematuria for the first time, and several times since, similar episodes had occurred lasting a few days. The last previous attack occurred one year ago.

The patient's company physician had examined him and found a moderate hypertension with albumin in the urine. He was seen by his physician who found a blood pressure of 160/90, gross blood in the urine, and a palpable mass in the right flank, probably in the kidney. No mass was found in the left flank and no abdominal tenderness.

Laboratory examination revealed blood count normal, nonprotein nitrogen 34, and creatinin 1.5. A cystoscopic examination revealed a distinct bladder neck contracture. Indigocarmine dye appeared in both kidneys in fair concentration in six and one half to seven minutes. X rays revealed both kidneys many times normal size, with typical polycystic configuration; left ureter calculous.

Course: The patient was discharged two days later with no specific treatment. Since his discharge he states that he has had little bleeding or discomfort, but his blood pressure remains moderately elevated.

Chronic Nephritis

Case IV.—Mr. N., aged thirty-four. The patient was admitted complaining of abdominal swelling for the past two years, headaches for one and a half years, a feeling of weight in the upper abdomen, and nocturia for one year, occasional diarrhea, and belching for two years. These symptoms had been increasing in intensity. Two years ago, he had a severe skin rash and also had had antiluetic treatment.

Physical examination showed a markedly enlarged heart with loud systolic murmur, tortuous arteries and an enlarged spleen. Both fundi showed tortuous arteries. His blood pressure varied from 180/110 to 155/96. His illness ran a stormy course in the hospital, with a great deal of nausea and vomiting. Laboratory tests showed nonprotein nitrogen 72, and remained persistently high; red blood cells 2,690,000; hemoglobin 49 percent; urine three plus albumin with casts. The patient was discharged from the hospital feeling much better. Five months later he was readmitted, at which time he was irrational, acidotic, with ascites and uremia. He died soon after admission.

Nephrosis

Case V.—This patient was a woman, aged thirty-four. At sixteen she became pregnant and vomited throughout her pregnancy. Her blood pressure varied from 190/100 to 160/100. There were no convulsions and she was delivered at term. Since then she had been in and out of various hospitals with edema of the face, hands, and legs, persistent albuminuria and many attacks of nausea and vomiting. In childhood she had pertussis, measles three times, typhoid fever, scarlet fever, smallpox and chickenpox.

Physical examination showed a moderate puffiness of the face, and a slight pitting edema of ankles and legs. The patient stated that a few days earlier she had been given an injection into her buttocks which caused a marked diuresis and she lost about fifteen pounds. She had no cardiac involvement and the rest of her physical examination was not remarkable. Her weight was 148 pounds.

Laboratory tests: Urine showed two plus albumin, no casts, specific gravity 1011, acid reaction; red blood cells, 4,300,000; hemoglobin 83 percent, total protein

7.04, albumin 4, globulin 3.04, nonprotein nitrogen 44, total chlorides 375, basal metabolism minus 10. This patient was first put on 1000 cc. of milk, with aluminum hydroxide added, and she did fairly well. She was next put on a salt free protein diet (140 grams daily) and in a few days she lost ten pounds. She is still under treatment and is doing well.

Discussion

The cases just reviewed represent the main types of nephritides, namely, glomerular nephritis, which is usually due to a beta hemolytic streptococcus infection and generally appears in two forms. The first form, which occurs in early life, is characterized by a sudden onset with the classical symptoms of nephritis, but usually continues in later life with the development of hypertension and renal insufficiency. The second type is more insidious and in older people is characterized by edema, hypoalbuminemia and albuminuria, and usually ends fatally with hypertension and uremia.

Pyelonephritis has been accepted as one group of Bright's disease cases. Although this is a relatively rare disease, it is more commonly found as a complication of some chronic disease. It is characterized by an inflammation in the interstitial tissue, with inflammation of the tubules and colloid casts.

Another group consists of congenital polycystic kidney disease, which may lie undetected for a number of years. It is usually characterized by albuminuria, hematuia, azotemia and finally uremia and death.

Mention should be made of a group of disorders known as nephroses, which are characterized by massive edema, a high albuminuria and a hypoproteinemia. In this group we find the lipoid nephroses, amyloid disease of the kidney, intercapillary glomerulosclerosis, and the type which is positive to the deposit of Bence-Jones protein in the tubules. In addition to this group, there are the larval nephroses and orthostatic albuminuria, as well as the nephrosis following poisoning with mercury and the use of the sulphonamides.

Since the heavy bombing of London some workers have described a socalled crush syndrome resulting from the pressure of crushing injuries. This condition is accompanied by shock hemoconcentration, marked hypotension, and finally scanty urinary output. At the end of the first week either a diuresis occurred, with recovery, or the urine ceased altogether and the patient died from uremia.

Regardless of the type of pathology that is represented by any of the diseases mentioned, several characteristic metabolic disorders occur, and a certain number of symptoms may be found in all types, namely, edema, nausea, vomiting, acidosis, azotemia or nitrogen retention, hypoproteinemia, albuminuria, hypertension, cardiac failure, and uremia. Rather than treat these patients from the standpoint of the pathology involved, it is probably better to treat them from a physiological point of view, and attempt to keep them alive and comfortable until the disease process heals in the kidney. In this way their lives may be lengthened by many years. In this discussion the work of Dr. George W. Thorn, of Boston, is quoted frequently. It is well to review some of the basic physiological principles. For health it is necessary to take in enough water to pass 1000 cc. of urine daily, calories sufficient to maintain weight, protein approximately one gram per kilogram of body weight, and essential minerals and vitamins.

In order to understand the various changes that may take place in metabolism in nephritic patients, it is necessary for us to know what the fluid intake and output is; what the serum protein is; the degree, if any, of acidosis, particularly if there are nausea and vomiting; also the nonprotein nitrogen level and the serum protein level, together with the albumin and globulin ratio, because it is safe to assume that every nephritic patient has some reduction of the serum albumin level. It is also necessary, in some cases, to know the serum chloride level. In normal individuals there is an equilibrium between the acid-base products in metabolism. The kidney is able to secrete an acid urine, the lungs are able to ventilate carbon dioxide and the kidneys are able to form the basic ammonia from urea. Patients with nephritis, however, usually have a depletion of their alkaloid reserve. Consequently, it is necessary to conserve the base reserve of the body by decreasing the acid-ash of the diet, by using a diet of neutral or alkaline ash and administering sodium. The first method can be used all the time but it is impossible to increase sodium in the face of edema. Consequently, by adding aluminum hydroxide to milk, a great reduction of absorption of phosphorus can be brought about, and also the elimination of the fixed acid.

It is necessary to know the serum protein of the blood because most nephrotic patients show a striking reduction in the serum albumin level and a rise in the globulin level; patients with nephritis also show a marked hypoalbuminemia. Since in most cases of nephritis it is possible to raise the serum albumin level by high protein feeding or giving amino acids orally or intravenously, it is apparent that serum albumin administration is probably the only effective means of compensating. It seems that when albumin is given intravenously, the benefit derived is from the temporary increase in colloid osmotic pressure, with increased hydremia, meaning water in the blood and increased glomerular filtration and the decrease in edema, azotemia. Therefore, repeated small doses are advisable rather than a single large one.

In order to maintain the serum albumin level, we have to consider the use of protein by mouth, amino acid either by mouth or vein, albumin plasma or whole blood intravenously. Patients with a normal blood urea level may be given two to three grams of protein per kilogram of weight with advantage, but those with azotemia should be restricted to one-half to one gram of protein per kilogram. It is much better to administer the albumin or plasma intravenously, but if these injections must be kept up for more than a week, the administration of amino acids is indicated. Intravenous albumin will not be available until after the war, so for the present it is necessary to use blood plasma, remembering that there is some sodium chloride and it is not as effective in cases of edema.

One must remember, when forcing fluids to increase glomerular filtration in cases of azotemia, that there may be a fall in the level of sodium chloride, and there is a real necessity for providing sodium chloride at that time.

Since we know the common disorders accompany-

ing renal insufficiency, namely, anorexia, azotemia, acidosis, anemia, edema, hypoalbuminemia, hypertension, and cardiac failure, we now have a group of physiological therapeutic agents to be used in the treatment of these disorders. These are water, minerals (sodium chloride, sodium bicarbonate, and sodium lactate), aluminum hydroxide, glucose solutions, solutions containing protein, albumin and plasma, whole blood, and a diet containing the basic nutritional elements for health. Our problem is to match the disturbances in renal function with the proper quantity of the indicated agent just mentioned. We shall start with the problem of edema.

Edema

Since most cases of edema are associated with a low serum protein, the purpose here is to increase the colloid osmotic pressure of the serum, thereby increasing the plasma volume and aiding in the elimination of salt and water. An acid-ash diet facilitates the loss of sodium and thereby reduces the extra cellular fluid. Consequently, we give a salt-free high protein (two to three grams per kilogram) diet, 1500 to 2000 cc. of fluid daily, twenty-five grams of an albumin given intravenously daily, also ammonium chloride, and mercurial diuretics. Thyroid extract and urea may prove helpful. With nausea and vomiting we use ten percent glucose intravenously, 1500 to 2000 cc. In case there is an added hypertension we use the intravenous albumin or plasma in divided doses, eight grams three times a day.

With edema, hypertension and cardiac failure, we attempt to improve the cardiac status and facilitate renal excretion of salt and water by using a diet of milk, 1000 to 1500 cc., or fruit juice, no additional fluids, digitalis, oxygen, and venous section. The intravenous use of fluids here is contraindicated. Occasionally a small quantity of hypertonic glucose solution, that is, fifty cc. of twenty percent solution, if the cardiac condition improves.

If an acidosis is proved, we may here use a diet of from two thousand to three thousand cc. of milk with added aluminum hydroxide, about sixty cc. per liter, or an alkaline ash diet with high protein content; also, intravenous albumin as before. In case there is nausea and vomiting we can use glucose, ten percent, fifteen hundred cc. daily, and possibly three hundred cc. of sodium lactate solution intravenously daily, and albumin as above.

In case we are dealing with edema plus acidosis plus azotemia, the purpose is to increase the colloid osmotic pressure of the serum, glomerular filtration, and facilitate the excretion of sodium chloride, water and end products of metabolism and also to provide an excess of base. This may be done by using two thousand to three thousand cc. of milk daily with added aluminum hydroxide, intravenous protein, glucose solution, fifty cc. of twenty percent intravenously, for three to seven days. If diuresis and edema disappear, then we may give about three hundred cc. of sodium lactate about every third day. If nausea and vomiting are present, we must use the protein plus intravenous glucose, about seven hundred cc. every eight hours. If hypertension is present, it is best to use about one-half the quantity of milk (750 cc.), the same amount of albumin and slightly less glucose. If, in addition to the foregoing syndrome, we find cardiac failure, we use the same diet, digitalis and oxygen therapy, venous section and nothing intravenously.

When azotemia is the predominating symptom, the purpose of the treatment is to increase glomerular filtration by the use of an excess of fluid intake and sodium chloride is given to increase the plasma volume and to prevent the depletion of salt. We give a diet with the basic nutritional requirement, but increase the fluids to three thousand to five thousand cc. daily; and glucose, one thousand cc. of five percent solution or five hundred cc. of ten percent daily, for three to seven days; sodium chloride, one to three grams daily in enteric coated capsules; excessive gain of weight and edema are contraindications. In case of nausea and vomiting, give three thousand cc. of intravenous glucose, ten percent, and five hundred cc. of normal saline daily, and if these conditions persist, twenty-five gms. of intravenous albumin must be given daily.

In the event that acidosis occurs with azotemia, we add sodium bicarbonate, three to six grams daily, by mouth and if edema persists, we discontinue sodium chloride and reduce the bicarbonate. If there is an added hypertension we give the same diet but do not use large quantities of glucose by vein in order not to overtax the heart, using fifty cc. of twenty percent glucose once daily for a week. The added sodium chloride by mouth must be used very carefully. Where there is azotemia with hypoalbuminemia, the purpose of treatment is to increase the glomerular filtration and the serum albumin level without increasing the nonprotein nitrogen level and to prevent edema. Here we use the basic diet which includes one gram of protein per kilogram, two thousand to three thousand cc. of fluid daily by mouth, twenty-five grams of protein intravenously daily for a week, five hundred cc. of glucose ten percent for seven days, with supplementary sodium chloride one to three grams. In the presence of nausea and vomiting the fluids must all be used intravenously. In case edema is added to the problem, we use a salt free diet, but otherwise basic, only two thousand cc. of fluid by mouth, twenty-five grams of protein intravenously, fifty cc. of twenty percent glucose intravenously daily. If diuresis results, give three hundred cc. of normal saline daily. If acidosis is an added factor we must use also three hundred cc. of 1/6 Molar sodium lactate intravenously. On every third day the protein and glucose solution are given.

Summary

This method of treatment is used to correct the principal metabolic disturbances that occur in any type of nephritic disorder and is not based on the nature of the pathological lesion in the kidney. The therapeutic agents used represent merely the replacement of normal body constituents and hypoalbuminemia is the most common metabolic change seen. There is great need for an unlimited supply of albumin for parenteral administration, if the patients are to be treated adequately. It is also necessary to know the blood protein nitrogen, serum chloride, carbon dioxide combining power and the serum protein level in these cases. Proper therapy may provide an opportunity for healing to take place in the kidney, so that the lives of these patients may be greatly extended.

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PRESENT STATUS OF BREWERS' YEAST AS A SOURCE OF ESSENTIAL AMINO ACIDS

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Amino acids, the building stones of protein, are essential constituents of body cells and fluids. They are important for proper growth and body development, and exert a profound influence in the regulation of osmotic relations between cells and intercellular fluids and between tissue and blood. They play a significant rôle in the fluid balance of the body. Most enzymes, hormones and immune bodies are substances containing amino acids.

The Essential Amino Acids

Chemically, proteins consist of large molecules or aggregates of molecules. These in turn are made up of simple units or building stones, the amino acids. According to most authorities, twenty-two amino acids are commonly encountered, but only ten are considered of special importance in the structure of tissue (growth). These are commonly designated as the essential amino acids: lysine, tryptophane, histidine, phenylalanine, leucine, isoleucine, threonine, methionine, valine and arginine (1). The body cannot synthesize these essential amino acids; they must be supplied in the foods eaten.

Table I: Protein Content of Common Foods (6)

Amount of Food in Grams		Amount of Protein in Grams
Meat, lean, medium done	100	30.0
Meat, medium fat, medium done	100	27.0
Halibut, cooked	100	20.4
Eggs, scrambled	100	10.1
Milk, whole	100	3.3
Milk, dried	100	28.7
Cheese, American	100	22.5
All-Bran cereal	100	13.8
Shredded Wheat cereal	100	11.0
Soy beans, cooked	100	14.4
Walnuts, California	100	12.5
Yeast, brewers' (7)	100	50.0[1]

There is ample experimental evidence (2) to show that animals which are fed a diet lacking or low in even one of the essential amino acids fail to grow normally. Thus, in the final analysis, the quality of protein in the diet is measured by its essential amino acid content.

Common Food Sources of Amino Acids

The protein of the human diet is obtained from both animal (meats, fish, eggs, milk, and milk products) and vegetable sources (cereal grains, peas, beans, nuts, and brewers' yeast). Of these the last mentioned is of particular importance since yeast is also one of the best natural sources of the vitamin B complex. As a matter of fact, until recently the value of brewers' yeast was measured purely according to the B vitamins it contains. Newer experimental and clinical investigations, (3, 4, 5) however, have called attention to brewers' yeast as a rich source of protein composed of all essential amino acids. The high protein content of yeast is evident when compared with that of other protein foods (Table I).

[1]Average protein content of Brewers' Yeast Powder Harris, the product on which all analyses referred to in this paper have been done.

Biological Value of Brewers' Yeast Protein

The protein of brewers' yeast is of the highest quality since it contains all 10 (8, 9) essential amino acids in approximately the proportions needed in human nutrition. Futhermore, the relative content of essential amino acids in brewers' yeast compared to its content of nonessential amino acids is high. Three and one-half ounces of brewers' yeast powder alone yields approximately half of the suggested optimal daily requirement of each essential amino acid necessary for the average adult person (10) (Table II). The high nutritive value of brewers' yeast protein is suggested by its high degree of in vitro digestibility (Table III) (9)

Table II: Amount of Essential Amino Acids Contained in Brewers' Yeast Powder and Suggested Daily Optimal Intake of Essential Amino Acids

Amino Acids	Amount in 100 Gms. Brewers' Yeast Powder (9)	Suggested Optimal Daily Intake for Adults (9, 10)
Lysine	3.2 Gm.	5.2 Gm.
Tryptophane	0.6 Gm.	1.2 Gm.
Histidine	1.5 Gm.	2.1 Gm.
Phenylalanine	2.1 Gm.	4.2 Gm.
Leucine	3.4 Gm.	5.4 Gm.
Isoleucine	2.8 Gm.	3.0 Gm.
Threonine	2.6 Gm.	3.5 Gm.
Methionine and Cystine	1.7 Gm.	3.8 Gm.
Valine	2.7 Gm.	4.2 Gm.
Arginine	1.5 Gm.	3.0 Gm.

Table III: Susceptibility of Proteins to Enzymatic Digestion (9)

With no Correction for Presence of Ammonia in Digest

TEST SAMPLES	FORMOL TITRATION VALUES OF DIGESTS AFTER ENZYMATIC DIGESTION: Initial Value	1st day	2nd day	5th day	Completely Hydrolyzed
	cc. 0.1N NaOH per 30 mg. total nitrogen				
Yeast, brewers'	3.77	7.35	8.74	9.80	20.65
Raw whole egg	1.99	2.19	3.47	4.21	21.36
Hard boiled egg	1.08	3.02	4.54	6.80	19.56
Skim milk solids	1.47	7.11	7.96	8.36	21.22
Whole milk	2.27	5.84	6.75	7.43	21.20

TEST SAMPLES	DEGREE OF PROTEIN HYDROLYSIS: After 1st day	After 2nd day	After 5th day
Yeast, brewers'	21	30	36
Raw whole egg	1	8	12
Hard boiled egg	11	16	31
Skim milk solids	29	33	35
Whole milk	19	24	28

and is evidenced by the fact that only fourteen and five-tenths percent of its absorbed nitrogen is eliminated in the urine as compared, for example, with sixty-one and six-tenths percent of navy bean nitrogen excreted in the urine (11). It is, therefore, not surprising that laboratory animals can grow on diets containing yeast as the sole source of protein. Osborne

and Mendel (12) showed that rats thrive well upon a diet containing brewers' yeast as the whole source of protein. Thaysen (13) asserts that, generalizing the various observations made, it may be stated that brewers' yeast protein—the most extensively studied form of microbial protein—possesses a nutritive value only slightly inferior to that of a good animal protein. Of special interest are the observations of Macrae (14) et al who not only confirmed the earlier observations on the value of yeast protein but also showed that a comparatively small addition of brewers' yeast protein to a diet containing only cereal protein of low dietetic value, greatly increased the value of the latter in the rearing of experimental animals.

How Yeast Can Supply Part of the Daily Protein

The recently adopted standards for national nutrition as prepared by the Food and Nutrition Board of the National Research Council provide for seventy grams of protein a day in the diet of a man weighing seventy kilograms and sixty grams of dietary protein for a woman weighing fifty-six kilograms. In other words, approximately one gram of protein for each kilogram of body weight. More than ten percent of this daily protein requirement can readily be met by incorporating two level tablespoons of brewers' yeast powder (twenty grams) in the food of the daily menu.

Brewers' yeast powder has a faint but pleasant nutlike taste. It can readily be used to enrich meat dishes (hamburger, meat loaf, etc.), soups (especially thick soups such as bean and pea soup), gravies, ketchup, chili sauce, tomato juice, peanut butter, chocolate milk, malted milk and a variety of other foods, Brewers' yeast powder mixes easily with these food substances and does not alter their taste when used in conservative amounts. One tablespoon of brewers' yeast powder may be stirred into each of the following amounts of food substances: two to three tablespoons of peanut butter, two cups of gravy, eight ounces of soup, two ounces of ketchup or chili sauce, four ounces of ground meat (meat loaf, hamburgers, meat casserole, stuffed peppers, stuffed cabbage), eight ounces of chocolate or malted milk. In addition to enriching these items with protein of high biological value, two level tablespoons of brewers' yeast powder a day also supply more than twice the minimum adult daily need for vitamin B_1 (thiamine). Forty-five percent of that of vitamin B_2 (riboflavin), forty percent of the recommended daily allowance of niacin for a moderately active man, plus all other factors (known and those not yet identified) of the vitamin B complex as found in this natural source material, as well as several minerals. Thus, enrichment of foods with yeast powder is of particular value in correcting the two major defects in many modern diets: a relatively small provision of certain vitamins of the vitamin B complex group and insufficiency of biologically superior protein (15).

Summary

Yeast, a rich source of the essential amino acids, can supply part of the daily protein need. This can be satisfied by the use of brewers' yeast powder whose average protein content is fifty percent and whose protein is of high biological value. It contains all ten essential amino acids in well-balanced proportions. More than ten percent of the daily protein intake can conveniently be met by incorporating two tablespoons of brewers' yeast powder into ground meat, soups, peanut butter, ketchup, chili sauce, gravy and other foods. This enrichment helps to correct the two major defects of many modern diets: protein and vitamin B complex deficiency.

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Toxic Reactions of the Newer Sulfonamides

Carl F. Vilter and M. A. Blankenthorn (*J.A.M.A.*, Nov. 11, 1944) present their findings in a study which was made of 1936 patients in the medical wards of the Cincinnati General Hospital who had been treated with sulfathiazole, sulfadiazine, sulfapyrazine, sulfaguanidine and succinylsulfathiazole. The authors state that sulfapyridine is now considered obsolete and is no longer used in this service, sulfanilamide is rarely employed, and only a preliminary report can be given on sulfamerazine, since its use has been recent. This particular study was undertaken to determine the relative incidence of untoward reactions to the various sulfonamide drugs used and the relation of the mild and readily recognizable symptoms to severely toxic reactions.

They summarize their findings as follows: Among 1,936 patients toxic reactions were recorded among 116, an incidence of six percent. These reactions were usually of such severity as to compel the arrest of treatment. Occasionally treatment could be resumed by changing to another drug. This could be done oftenest by changing from sulfathiazole to sulfadiazine.

Death was ascribed to toxic effects mainly in four instances (0.2 percent) and death in five cases was certainly hastened by drug intoxication. All fatal toxic reactions were mainly renal and resulted in uremia. In no instance was blockage of the pelvis or ureter thought to be the cause. There was no correlation of the milder forms of intoxication to the more severe or lethal.

Therefore there are no premonitory signs of renal intoxication. Mild signs of disease of the kidney pelvis are microscopic hematuria, oliguria, incontinence, pain and elevated blood urea. If these signs are observed, sulfonamide treatment should be stopped or continued with great care lest nephrosis occur.

Editorials

Tuberculosis

It has been reported in recent surveys that the death rate from tuberculosis in Great Britain increased thirteen percent after two years of war. It seems evident that in countries which have been occupied, such as France, Greece and Italy, the increased incidence of tuberculosis will be much greater. Some future day we shall realize the havoc this war has wrought, not only in the increase of such diseases as tuberculosis but in the mental, moral and physical destruction there has been, is being, and will be created.

We know a lot more about tuberculosis today than we did fifty years ago. We know that we have no specific drug which will combat the disease. It is common knowledge that the treatment of the condition consists of sunshine, good food and good housing, and an avoidance of overexertion. We know under what conditions tuberculosis will develop and spread: poor food, poor housing, overcrowding and a disregard of basic hygienic conditions. We have within our reach excellent means for detecting the presence of tuberculosis in its early stages, which is of great importance. Much excellent propaganda has been carried out by the Public Health organizations, by the press and the medical profession. We have at our disposal mainly the x ray diagnostic technique where thousands of persons can easily and quickly be examined in order to detect early lesions. This procedure has been made economical through the use of the microfilm which permits several hundred photo-fluorograms in an ordinary eight hour day. The cost of these is about fifteen cents each; but we can do all the educating and examining that we want to do, and while these are important and helpful, they do not change the conditions which are prevalent in many regions in this country which must cause a marked increase in the cases of tuberculosis.

We have pamphlets which tell about proper eating, proper hygiene, the avoidance of undue fatigue and emotional strain, and yet there are many millions of our population who are overcrowded to an unhealthy degree, who are working over longer periods of time than they are accustomed to under most unwholesome conditions, with improper diets, and practically all of them under intense emotional strain. The pamphlets cannot change all this. We are bound to have an increase in tuberculosis. Of course, many well-meaning persons say the war will soon be over and we will go back to a more sanitary form of life, but if we go back to a saner form of life with a goodly number of our population infected with tuberculosis, they all go back as carriers; and a carrier under the most sanitary circumstances is always a danger to his immediate contacts. We feel that this is a vitally important subject and that something stronger than pamphlets are needed.

Sudden Asphyxial Death

Asphyxial death is usually sudden. A boy goes out to swim too soon after a big meal, is seized with "cramps", drowns alone, or if pulled ashore fails to rally. Firemen or police come with a "resuscitator", but resuscitation is not accomplished. One sometimes wonders why a physician is not called. Has the public lost confidence in our ability to revive an asphyxiated person. Of course, the glamour of the police or fire wagon is appealing and spectacular, while the physician must work quietly, without fanfare. The mechanical contrivance has saved an occasional life, but it is common medical opinion that it may do more harm than good, because its use is not based on an understanding of the *causes* of asphyxia, such as a blocking of the lower airways by a foreign body, or failure of the respiratory center in poliomyelitis. In any case, immediate action is called for, but this must be based on a thorough knowledge of the art of resuscitation. How many physicians are prepared to carry out all the intricate details of this art?

In 1933, an article was published in the *American Journal of Surgery,* entitled "Asphyxial Death a Professional Disgrace". Out of the interest it aroused the Society for the Prevention of Asphyxial Death was incorporated, with its founder, Dr. Paluel J. Flagg, as president-director. The necessity for research and for the dissemination of knowledge to all physicians, nurses, hospitals, and public health agencies was promptly recognized by most county, state and other medical societies. The American Medical Association appointed a Committee on Asphyxia in 1937 and every professor of obstetrics who could be found was circularized. Some sixty-three medical schools replied, but little came of the new movement. In 1939 it was revived by Surgeon General McIntire when he opened a department of pneumatology at the World's Fair, but the impetus again soon died out chiefly because instructors were lacking, or could not give the time demanded without remuneration. "No funds" was the phrase heard in most hospitals.

The Children's Bureau, in Washington, and the director of maternal and child welfare responded, but again there seems to have been no funds which could be allotted to this great enterprise. All forty-eight states were informed of the need; fifteen responded. Even today, after ten years of effort, many physicians and institutions seem to know little or nothing of either the need or the methods of reviving the asphyxiated. Dr. Flagg is asking some pertinent questions:

Of the general practitioner he is inquiring, What treatment do you advocate for the various stages of asphyxia? Of the nurse, How would you treat a case of asphyxia if left entirely alone with such a problem? Of the hospitals, Whom of your staff would you call as an "expert" in a case of asphyxia in the operating room or in the accident room. What is your routine in carbon monoxide poisoning, electric shock, chemical gas poisoning, shock from total submersion, asphyxia neonatorum, acute respiratory failure in poliomyelitis? What routine is followed in an ear and throat postoperative patient who shows signs of asphyxia after being put back to bed? Of medical school officers he would like to know what instruction is given to students if they were called on to revive an asphyxiated person, other than the Schafer or the Silvester method? How many can use an electrically lighted laryngoscope or remove a foreign body by direct vision? Of firemen and policemen: What stages or degrees of asphyxia can you men recognize? Give the treatment you would apply other than mechanical. Impending death from asphyxia is of immense importance. Why then is so little known about it among "general men?" Answer: They have never been taught.

In order to raise money to do just this, Dr. Flagg has a plan whereby anybody who lost a son in this War may buy a twenty-five dollar bond, and offer it or its equivalent to the Society for the Prevention of Asphyxial Death to develop a fund, the proceeds from which may be used to instruct doctors, nurses and other medical personnel in the art of resuscitation. Certainly the *need* is great; we hope the "plan" will work enormous good to a great host of unfortunate persons about to die from asphyxia of whatever kind. They *can* be saved; they *must* be saved. The method is at hand. Only wide distribution of the method is needed, but it will take money to do it.

Unemployment, War and Sickness

Unemployment, largely brought about by the advance of machinery so quickly that humans had not had time to adapt themselves to the sudden change, had in its turn much to do with bringing on the war. Unemployment, that is to say the displacement of man by the machine, has been the cause in most countries, especially industrial countries, of extreme discontent and for the mental and physical deterioration of many of the unemployed. This feeling of discontent was fostered and fanned by the extremes of wealth and poverty to be witnessed in the industrial lands and taken advantage of by comparatively poor and aggressive nations, the leaders of which thought they saw an easy way of getting rich, and at the same time rising to power themselves. Perhaps, with the abolition of unemployment war would cease, but many reforms would have to come into being to bring this about.

To abolish unemployment requires positive and constructive action, material and spiritual. As for war, prosperity pervading all sections of the civilized world might put an end to it. However, just so long as one nation is striving for its own selfish ends without regard to the needs of the community at large the tendency toward war will continue. It must be borne in mind that war finds employment for the unemployed. There is no easy road to prosperity and until good faith is observed among nations and the pursuit of national interest is checked, at least to a great extent, there never will be. The world is sick and needs sane treatment, and its inhabitants are sick, perhaps more mentally than physically, and require careful treatment. As the struggle goes on disease in many forms will lift its head and the world, as in the socalled Dark Ages, will suffer from ills of the body aggravated by those of the mind, and if not purged of its sickness it means that chaos will come.

News Items

Clinical Conference in Chicago.—The Chicago Medical Society will hold its second annual clinical conference on February 27th and 28th, and March 1, 1945. The committee in charge is arranging a program which will deal with important and timely subjects, and there will be a large technical and scientific exhibit. Further information will be given at a later date.

Lectures to the Laity.—Dr. James H. Wall, White Plains, New York, delivered a lecture on the "Development of Modern Psychiatry" at the New York Academy of Medicine, on November 30th. This constituted one of the tenth series of lectures to the laity now being given. The main topic for this series of lectures is psychiatry in medicine, and six addresses will be presented on the subject.

Clement Cleveland Award.—At the eighteenth annual meeting of the New York City Cancer Committee, held on October 31st, Dr. R. R. Spencer, chief of the National Cancer Institute, Bethesda, Md., was presented with the Clement Cleveland award for outstanding service during 1944 in the effort to control cancer by education. The presentation was made by Dr. Frank E. Adair, president of the American Cancer Society, and Dr. John C. A. Gerster, chairman of the committee, presided.

International College of Surgeons.—At the annual meeting of this organization, held in Philadelphia, last October, Dr. William Bates, Philadelphia, was named president-elect of the United States chapter, and Dr. Rudolph Jaeger, also of Philadelphia, was inducted into the presidency. Major Charles H. Arnold, M.C., U.S. Army, was elected secretary and Dr. Benjamin I. Golden, Elkins, W. Va., treasurer. Announcement was made at the meeting that the international headquarters would be transferred to New York.

First Lasker Award.—Dr. William C. Menninger, chief consultant in neuropsychiatry in the Surgeon General's Office of the United States Army, has been given the first annual Lasker award of $1,000 for "outstanding service in the field of mental hygiene". The presentation was made at the thirty-fifth annual meeting of the National Committee for Mental Hygiene by Brigadier General Raymond W. Bliss, assistant surgeon general. This is the first Lasker award, recently established by the Albert and Mary Lasker Foundation.

Clinical Society of Reconstruction Hospital.—At a meeting of this society, held in New York on November 15th, the program consisted of the presentation of cases illustrating injuries in children. These injuries included depressed fracture of the skull, Colles' fracture, supracondylar fracture of the humerus, fracture of the skull, epiphyseal separation of the lower end of the radius and ulna, and intertrochanteric fracture of the hip. The cases were presented by Dr. Carl Peterson, Dr. Henry H. Ritter, and Dr. David Goldblatt who is chairman of the society.

Health Insurance Plan of Greater New York.—The conference committee of the Health Insurance Plan of Greater New York met with the presidents and other representatives of the county medical societies in the Metropolitan area on Friday, November 17th, at the Academy of Medicine, to explore the possibilities of their cooperation in developing the comprehensive medical service plan originally announced by Mayor LaGuardia last spring. The conferees stated that there had been an encouraging exchange of views and planned to meet again on Friday, December 1st.

Care of Patients in Mental Hospitals.—At the thirty-fifth annual meeting of the National Committee for Mental Hygiene, held in New York on November eighth and ninth, Dr. Samuel W. Hamilton, mental health advisor, division of mental hygiene, U.S. Public Health Service, Washington, D.C., described a needed program to improve the care of patients in mental hospitals. The essentials of improved care, still lacking in some hospitals, were listed by Dr. Hamilton as more and better personnel, including psychiatrists, nurses, social workers, and attendants; more intensive therapy; and making mental hospitals centers of community mental health work and teaching posts, and not merely institutions for the care of the sick.

Friday Afternoon Lectures.—Lectures to be given during January and February 1945, in the current Friday afternoon lecture series being given at the New York Academy of Medicine are as follows:

January 5th: The therapy of liver diseases, by Charles L. Hoagland, The Hospital of the Rockefeller Institute for Medical Research;

January 12th: Present trends in the treatment of pulmonary tuberculosis, by H. McLeod Riggins, College of Physicians and Surgeons, Columbia University;

January 19th: The modern concept of rheumatic fever, by Robert F. Watson, The Hospital of the Rockefeller Institute for Medical Research:

January 26th: The problem of alcoholism, by Howard W. Haggard, Yale University;

February 2nd: The L. Duncan Bulkley Lecture: Hormone therapy and human mammary cancer, by Fred W. Stewart, Memorial Hospital;

February 9th: Specific remedies in the prevention and treatment of the exanthemata, by Philip M. Stimson, Willard Parker Hospital;

February 16th: Shock treatment of psychoses, by Nolan D. C. Lewis, New York State Psychiatric Institute.

Association of American Medical Colleges.—At the annual meeting of this association, held in Detroit in October, Dr. John Walker Moore, Louisville, Ky., was named president-elect and Dr. Albert C. Furstenberg, Ann Arbor, Mich., was installed as president. Dr. William S. McElroy, of Pittsburgh, Pa., was elected vice-president, and Dr. Fred C. Zapffe and Dr. Arthur C. Bachmeyer, both of Chicago, were reelected secretary and treasurer, respectively. The next annual meeting of the association will be held in New Orleans, La., October 29-31, 1945.

New Medical Director of Metropolitan Life.—Dr. Earl C. Bonnett, former associate medical director of the Metropolitan Life Insurance Company, has been appointed medical director of the company, succeeding the late Dr. Charles L. Christiernin, who died on October 18th. As head of the company's medical division, Dr. Bonnett will supervise a staff of about eight thousand physicians who serve as medical examiners in the United States and Canada. He will be responsible for the formulation of rules for medical examination of applicants for insurance and will advise in the establishment of rules for the selection of risks. His duties will also include the medical care and periodical physical and dental examinations of about fourteen thousand employees.

Health of Army in the United States.—A report from the Office of the Surgeon General states that there has been a slight seasonal increase from the low summer level in the incidence of colds, influenza, and other common respiratory diseases among soldiers stationed in the United States. However, the current rates (October 13th) are below those for any other year during the present war. The incidence of meningitis, measles, mumps and other respiratory-transmitted diseases remains at or below the summer level.

Directory of Psychiatric Clinics.—The National Committee for Mental Hygiene announces the publication of a new directory of psychiatric clinics and related facilities in the United States, with special reference to rehabilitation needs of veterans. This directory, which is broader in scope than previous ones, is published primarily for medical officers and other professional members in the armed forces and the American Red Cross, but professional workers in civilian agencies will find it useful. It contains a list of facilities, such as state hospitals and other institutions for the mentally handicapped, state departments dealing with clinics, state societies for mental hygiene, Veterans administration neuropsychiatric hospitals, community psychiatric clinics, and other agencies.

Cancer Society Changes Name.—The American Society for the Control of Cancer, announces that it has changed its name to American Cancer Society; with the change of name the activities of the society will be broadened. Heretofore it has been concerned chiefly with educating the public concerning cancer, but it will now seek to obtain funds for cancer research, diagnosis and treatment, and education. While the Society will not conduct research or own or operate hospitals, clinics or laboratories, it will raise and distribute funds to aid such institutions and projects as may be approved by its board of directors. The Society also announces that the name of its lay educational organization, The Women's Field Army, has been changed to The Field Army, men as well as women are concerned in the work.

Salmon Lectures for 1944.—Brigadier General J. R. Rees, consultant psychiatrist to the British Army, delivered the Salmon lectures for 1944 at the New York Academy of Medicine, November twentieth, twenty-first and twenty-second. The subject of General Rees' first lecture was "The Frontiers Extend", in which he reviewed the experiences of the war, in so far as they open up new psychiatric responsibilities. The subject of the second lecture was "Opportunities Emerge", and of the third "The Way Ahead".

Physical Therapists Needed for Infantile Paralysis Treatment.—The National Foundation for Infantile Paralysis have trained most physical therapists in the modern principles of treating infantile paralysis but more technicians are required, for its pointed out that one of the greatest handicaps in rendering effective aid in any epidemic has been the lack of a sufficient number of physical therapists. Scholarships, sponsored by the National Foundation in accredited schools of physical therapy, are available to graduate nurses, graduates in physical education, or those with a minimum of two years undergraduate college work of science courses. Application for these fellowships may be made through the National Foundation or to the American Physiotherapy Association, 1790 Broadway, New York 19, N.Y.

Pencillin for Prisoners of War in Germany.—On the basis of recommendations by medical officers recently repatriated from German prison camps and hospitals, the American Red Cross has sent five thousand tubes of penicillin by air express to the International Red Cross Committee in Geneva to be used for American prisoners of war held by Germany, and additional shipments of medicines and medical supplies will be made. The International Red Cross Committee has been asked to keep the prison camp leaders informed of the medicines available in the stocks held in Geneva for their use, and not allow camp stocks to become depleted before reordering.

The Gorgas Medal.—Commander James J. Sapero, U.S. Navy, has been awarded the Gorgas Medal for 1944, for "distinguished service as an officer of the Medical Corps, United States Navy, in the field of preventive medicine for the armed forces." The presentation was made at the annual dinner of the Association of Military Surgeons of the United States, held in New York, November 3, 1944. In making the presentation, Frank F. Law, vice-president of Wyeth Incorporated, quoted as follows from Albert Q. Maisel's book, *The Wounded Get Back*: "The Navy and its associated forces in the Pacific have succeeded in holding malaria in check, in beating down the sickness rate month by month, and in holding the death rate from malaria down to a tiny fraction of one percent." He also said that Dr. Sapero was the organizer of a series of malaria control commissions which now operate in every area in the South Pacific where American troops are located.

The Gorgas Medal was established in 1942 in memory of Dr. William Crawford Gorgas, Surgeon General of the United States Army during the first World War. In 1942 a threefold award went to Rear Admiral Edward R. Stitt of the Navy Medical Corps, and Brigadier Generals Frederick F. Russell and Jefferson R. Kean, former Army surgeons. In 1943, the medal was awarded to Dr. Hugh S. Cumming, Surgeon General, United States Public Service, retired.

Audio-Visual Aids for Reconditioning Program.—Emphasizing the importance of audio-visual aids in the reconditioning program, all Army general hospitals in this country will be equipped with audio-visual libraries. These libraries, which will include movies, recordings and exhibits, will be used in connection with courses given convalescent soldiers and in addition will provide the men with recreational and diversional facilities. A course in the use of audio-visual aids is being included in the curriculum for the Reconditioning Department at the School for Personnel Services at Lexington, Va.

Personal.—Dr. Henry E. Meleney, professor of preventive medicine, New York University College of Medicine, has been appointed a member of the National Research Council. He will represent the American Society of Tropical Medicine in the division of medical sciences of the council.

Dr. Leo Loewe of New York delivered the seventh annual Louis Gross Memorial Lecture at the Jewish General Hospital, Montreal, his subject being "Further Observations on the Combined Use of Penicillin and Heparin in the Treatment of Subacute Bacterial Endocarditis".

Dr. Arcangelo Liva, Hackensack, N.J., has been appointed dean of the Essex College of Medicine, recently established in Newark.

Dr. John Walker Moore, Louisville, Ky., was named president-elect of the Association of American Medical Colleges, at the recent annual meeting of the society, held in Detroit.

Dr. L. Emmet Holt, Jr., associate professor of pediatrics, Johns Hopkins University School of Medicine, has been appointed professor of pediatrics at the New York University College of Medicine and director of the pediatric service at Bellevue Hospital.

Dr. Oswald Avery, emeritus member of the Rockefeller Foundation for Medical Research, was awarded the gold medal for distinguished service in medicine of the New York Academy of Medicine, on October 5th. The award was made in recognition of his investigations that "have led to discoveries and great advances in the science of bacteriology".

Dr. Edward A. Strecker, Philadelphia, delivered the seventeenth annual Pasteur lecture of the Institute of Medicine of Chicago, on November 2d. The subject of his lecture was War Psychiatry and its influence on postwar psychiatry and civilization.

Major General Norman T. Kirk, Surgeon General, U.S. Army, has been elected one of the six new members of the National Committee for Mental Hygiene, in recognition of his "unusual awareness of the importance of skilled psychiatric treatment in the Army".

Dr. Carl V. Moore, associate professor of medicine, Washington University, St. Louis, Mo., was recently appointed a member of the Army Epidemiological Board.

Dr. R. R. Struthers, professor of pediatrics, McGill University, Montreal, Canada, has been appointed pediatric consultant with the United Nations Reconstruction and Rehabilitation Administration.

Dr. Herman L. Kretschmer, Chicago, president of the American Medical Association, delivered the annual Lower Lecture before the Cleveland Academy of Medicine, on November 24th, his subject being the "Present Status of the Prostatic Problem".

Sir William Osler's Letters

On the Occasion of the Twenty-fifth Anniversary of His Death

SOLOMON R. KAGAN
Roxbury, Mass.

Sir William Osler was the foremost clinician of his time, the teacher of teachers, and an authority on pathology and medical ethics. He advanced the knowledge of medicine, enriched medical literature and the humanities, and inspired other investigators and teachers to accomplish valuable work in all branches of medicine. His teaching and interests were not limited to medical research and history but dealt with every phase of medical life and literature. He was the guide and mentor not only of his pupils and collaborators but also of the medical profession as a whole. He implanted a love of books, morals, and humanitarian causes. He was the incarnation of an ideal physician and beloved teacher.

Osler was a successful leader and a rich and remarkable personality. He was admired and beloved for his charming and unique character. He had a great creative and animating spirit in teaching medicine. His monumental work reflects erudition, versatility, soundness and sincerity. His unusual ability and great achievements were recognized by his contemporaries, and they conferred upon him numerous deserved honors and the highest positions in the medical world.

Sir William Osler died on December 29, 1919, twenty-five years ago. It is timely to recall Osler's statement to Colonel Fielding H. Garrison in 1917 about the importance of defeating the Germans, "since the military spirit of the German nation is a menace to the world's peace and civilization".

Osler's name will go down in history as a benefactor of mankind.

While I was preparing my work on Sir William Osler, I was fortunate to collect a great number of his letters to his friends, associates and pupils[1]. The greater part of these interesting letters I published elsewhere[2]. I am presenting here twelve more letters of Osler.

Osler used to encourage his young pupils and stimulated them to do research work. He was much interested in the publications of the Johns Hopkins Hospital staff, saying: "Keep up the good work, and you will get to the top." He wrote to his former pupils kind letters, showing his understanding of their endeavors and his interest in their work and advancement. The following four letters of Osler are addressed to his pupil, Dr. Herbert W. Allen, of San Francisco.

Baltimore, Dec. 18, 1899

Dear Allen:

Could you come in on Wednesday, the 20th, at eight-thirty, and have the meeting? I shall be away next Saturday. I shall be at home, and shall expect any of you who are in town for Saturday evening the 30th also.

Sincerely yours,
Wm. Osler

Baltimore, Monday

Dear Allen:

Will you come to dinner on Wednesday next at 7 p.m.? So sorry to have played truant on Saturday eve but it was unavoidable. Yours,

Wm. Osler

* * *

Pointe a Pic, P. Q., Aug. 11 [1902]

Dear Allen:

Your letter of the 15th has caught up to me here. I am sure the case is of sufficient interest to put on record. *American Medicine* would be a good journal to which to send it. You may have noticed my two short papers on the subject in it a few months ago. Your case seems very characteristic. I hear very good accounts of you from the Cleveland men. I hope you like the place and the work.

With regards and best wishes, sincerely yours,

Wm. Osler

* * *

Oxford, 3rd June, 1912

Dear Doctor,

I do not know of anyone, at the moment, who would be suitable. I do not think Dr. Gibson would entertain it for a moment. I should think it would be better for you to get one of the younger men from a good clinic at Baltimore, Philadelphia or New York. The man should have a first rate opportunity to build up a reputation for himself and do good work.

Sincerely yours,
Wm. Osler

The following note of Osler was addressed to his pupil, the late Dr. S. Adolphus Knopf, of New York.

Baltimore, X 26, 01

Dear Dr. Knopf,

Thanks for your kind congratulations. Your articles also received and I have looked them over with much interest. What a good work you are doing!

Sincerely yours,
Wm. Osler

The following Osler's note was written to his pupil, the late Dr. Maude E. Abbott, of Montreal, Canada, who worshipped her great teacher.

Pointe a Pic, P. Q., Aug. 7, 1902

Dear Dr. Abbott,

Shall you be in Montreal next Sunday? If so I will come to the Museum about 11 o'clock. I am most anxious to see the new building and to hear of your plans. Yours sincerely,

Wm. Osler

On August 1913 Osler sent the following note to Dr. Hermann Sahli, who was Professor of Medicine at the University of Berne, author of *Lehrbuch der Klinischen Untersuchungs-Methoden* (3 volumes), *Tuberkulinbehandlung, Tuberculin Treatment*, etc., and a friend of Osler.

Lochinvar, N. B., 15th [Aug. 1913]

Dear Sahli:

I was so sorry not to have seen more of you. I wish we could have seen you at Oxford, but I had to leave on Tuesday night to join my family here.

Sincerely yours
Wm. Osler

---

[1]These letters were sent to me for publication by Colonel Fielding H. Garrison, Dr. James J. Walsh, Dr. Joseph McFarland, Mrs. Margaret Estey, and Dr. Esther Rosencrantz.

[2]S. R. Kagan: *Leaders of Medicine*, Boston, 1941, pp. 102, 113-121; idem: "Doctors' Letters," MEDICAL RECORD, 152:417-18, 1940.

The following note was sent to Dr. Frank Lynch, of San Francisco, who was a student at Johns Hopkins and a pupil of Osler. He is now a professor of gynecology at the University of California Medical School

Oxford, 6 Dec. 1913

Dear Lynch,

So glad to have your papers and to see how rapidly you are climbing the ladder. I shall hope to see you in October when I come to the Hospital celebrations.

With kind regards, sincerely yours,

Wm. Osler

The following two letters were written to Dr. Henry Rushton Fairclough, late professor of classical languages at the Leland Stanford Junior University. Dr. Fairclough was Osler's friend.

30 Xii 17

Dear Fairclough,

Yours of the 2nd came this a.m. If they could get passports I could find them work to do—as V.A.D.'s[3] here or in London. The difficulty is to get over.

So glad to hear you keep well. *Go slow.* Your engines are good for a trip round the world at 10 knots, but useless for the Vaterland at 25.

All well here—but sad losses everywhere. We had to give up our only boy a few months ago.

Sincerely yours

Wm. Osler

* * *

Oxford, 9 April 1918

Dear Fairclough,

Your two girls are hard at work on the War Patients at the Radcliffe Infirmary, where I think they will be very happy. I should think you could get a job with the American Red Cross. It seems to have a very elaborate organization over here, and of course, the work is increasing rapidly.

With kind regards, sincerely yours,

Wm. Osler

During 1914 and 1915, negotiations were conducted between the University of Pennsylvania and the Medico-Chirurgical College of Philadelphia. These discussions culminated in an amalgamation of the two schools in 1916. Dr. Joseph McFarland was one of the prime movers and exponents of this union. On this occasion, Osler sent to Dr. McFarland the following note:

London, November 21, 1916

Dear McFarland,

So nice to have your long letter[4]. Congratulations on the amalgamation, the details of which I have been following with great interest. It's a wise scheme. You must be very pleased. All goes well here, but it is a long and weary struggle. We are only in the midst of it, I fear. The sacrifice of life is appalling and we have suffered terribly at the University. Some of our very best young teachers have been killed. I will look out for your book . . . Yours sincerely,

Wm. Osler

---

[3]V. A. D. refers to the last war in England. It was the "Voluntary Aid Detachment"; those women who volunteered their services as untrained nurses. Professor Fairclough's daughter and friend volunteered, and that is what the letter refers to.

[4]Dr. McFarland tells me that he did not write to Osler on the matter of amalgamation of the two medical schools. It must have been the long letter of another Philadelphia physician, but Osler, knowing of Dr. McFarland's participation in this work, erroneously attributed the letter to him.

Dr. Fielding H. Garrison, in collaboration with Dr. Casey A. Wood, prepared in 1919 a *Physician's Anthology* for publication, in which work Osler was considerably interested. Garrison sent him the manuscript, and Osler presented it to the publisher, Milford, in London, for consideration of publication. On this occasion Osler wrote to Garrison the following:

Oxford, 15th (1919)

Dear Garrison,

Nothing yet from Milford. I suppose the MS is in process of "purification". There are still many things in it I wish to see. The Press will follow your wishes as to format. I am sure the Vol. will be most attractive.

I think I have sent a line since my illness. Still in bed. End of 5th week, but better—only an occasional paroxysm of coughing. It has been a slow business but not unpleasant. I love bed, and am very happy with four pillows and my legs drawn up.

I have gone thro. Lucas! Lamb with great delight. How glorious it would have been to have known the dear man—& even to have got . . . with him now and then. . .

Yours ever,

Wm. O.

The following letter was sent to Dr. James J. Walsh of New York:

19, Dec. 1913

Dear J. J. W.,

I do not know where your letter of Oct. 11th has been, but it has just turned up at the bottom of a pile. I will ask at the Bodleian what would be the best piece of Oxford architecture of the last half of the 15th century. I should think the superb Divinity School. I will let you know. . . .

Sincerely yours,

Wm. Osler

P.S. I have just seen Madan, who says the Divinity School is the *thing*. Any Oxford collection will give a picture—or if you wish I could send a recent one.

From Sir William Osler to Colonel F. H. Garrison

Oxford, 10th [1916?]

Dear Garrison,

I have neglected you & many others, but it has been unavoidable. Hopeless MSS! Secretary gone, butler & chauffeur too and I have a correspondence bureau to manage, but in such days it is a comfort to be busy. I am awfully in arrears with work. I am struggling with the early incunabula; a new edition & all sorts of interest in the sick & wounded. . .

Sincerely yours, Wm. Osler

* * *

Dear Garrison,

30. IX. '19

Chapman, one of the Press Secretaries, took Anthology MS with him on vacation, & has not yet returned. I understood from him that the Press will take it, so if you have ideas as to format &c send them on. An attractive volume should be made as the stuff is A.1. There are one or two I may wish to slip in. C. A. W. (C. A. Woods) writes that he will be with you soon so read this to him. . . Wm. Osler

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I wish to express my gratitude to Dr. W. W. Francis, Librarian of McGill's Osler Library, Montreal, for valuable suggestions and corrections.

Book Reviews

Medicine in Latin America

Æsculapius in Latin America. By ARISTIDES A. MOLL, Ph.D., secretary-editor of the Pan American Sanitary Bureau, Washington, D.C. Illustrated. Philadelphia and London: W. B. Saunders Company, 1944. Pp. 639. Price $7.00.

In this book Aesculapius is not a man but a synonym for the word, "medicine". The author might have written "Hippocrates" or any other one of the "fathers of medicine". In any case Latin grammars would record the statement as "a condition contrary to fact".

We have here a scholarly book dealing with historical medicine below the Rio Grande. The Spanish conquerors have a bad name, but they set up a reasonably helpful type of civilization especially in the realm of healing. We are told that fully one hundred sixty years before there was any hospital in the American colonies the Spaniards had established institutions, call them what you will, for the healing of the sick. The first recorded hospital in Philadelphia was opened in 1750, and the first in the New York area, in 1776. Naturally enough Old World medicine was transplanted to the Western Hemisphere long before the colonies got going, and it has been working that way ever since. Education, commerce and industry were and still are European in foundation and essence. Only recently have we of "The States" tried to learn more about our neighbors to the South, and it must be admitted that they have much to offer. An interchange is sure to take place after this War, doubtless to the advantage of physicians and people. Most of us admit that we obtained quinine and its derivatives, and coca and its derivatives from South America, but we need to know that these are merely examples of other benefits.

It is fortunate that Dr. Moll had the urge and the leisure to undertake so great a task. He admits that much of it was completed before "these moments of anguish and tragedy for civilization had stormed the citadel of mankind. The historically-minded will regard the publication of this book as an event of prime importance. This is true especially if we bear in mind the importance of "cultivating" good will in the neighborhood of the equator. In no case will all of the "profit" (not wealth) be on one side. We have much to give but we can also take much to our own great benefit.

Rorschach's Test

Rorschach's Test. 1. Basic Processes. By SAMUEL J. BECK, Ph.D., department of neuropsychiatry, Michael Reese Hospital, Chicago. Foreword by WILLARD L. VALENTINE, Ph.D., head of department of psychology, Northwestern University. New York: Grune and Stratton, 1944. Pp. 223.

In rationalizing the history of the Rorschach method, some future student will find two reasonable dates fixed for him. The first one in 1937 ended the preliminary exploratory period. In the seven years since the publication of the author's first manual, arguments about whether the Rorschach method was a scientific method or an art of practice, whether standardization should be imposed or whether it should not, whether the technique was communicable or whether it depended on a mysterious clinical insight, have given way to the general acceptance of Beck's viewpoint that the method is public, repeatable, and objective. A third period of significance in Rorschach history will develop around the year 1944, corresponding with the appearance of this new volume. The requirements of the pioneer era have been served; we now get down to details of development. In this book there are only three complete records described, whereas the earlier manual presented fifty-nine, with a complete interpretation of each one. The reader of the present volume sits at the side of an expert and watches him score literally thousands of detailed and individual responses while he points out his reason for scoring a given response as he does not score it differently. Responses are drawn from a large pool of normal or mildly disturbed persons than has been available hitherto. The definitely pathological persons form entirely new materials for study.

This is a reference book for the student and expert alike. As such, it is technical, exhaustive, detailed. Each basic problem in scoring is given a separate chapter. As the scoring precepts are developed, card by card, examples of the scoring procedure are given, so that the student does not have to thumb through records searching for examples.

Minor Surgery

Minor Surgery. Edited by HUMPHRY ROLLESTON and ALAN MONCRIEFF. New York: Philosophical Library, 1944. Pp. 174.

This book consists of a series of eighteen chapters, each written by a British specialist out of his experience as a member of the staff of various hospitals. All of these institutions are famous names to the ears of Americans, such as Charing Cross, Middlesex Hospital, Manchester Royal Infirmary, St. Bartholomew's, and so on.

The first chapter concerns itself with minor wounds as described by Surgeon Rear-Admiral Cecil Wakeley, who is consulting to the Royal Navy, to the Emergency Medical Service and the Ministry of Health. Sprains and feet are each treated separately. Also the hand, mouth, nose and throat, ear, eye, skin, and rectum. The final chapter describes anesthesia and analgesia as practiced at "Saint Barts" by C. Langton Hewer, M.B., B.S., D.A. He wisely says that "the intrinsic risks of anesthesia and analgesia are not diminished because they are only being used for minor surgery. He cannot with a clear conscience take a chance because only a trivial operation is to be done". There are, of course, differences in methods and procedures relative to our American techniques, but Great Britain has for many years held a high place in surgical research. It is likely that after the war, both of our English-speaking countries will be centers for postgraduate teaching. This book will serve the needs of such students very well indeed.

Child Guidance

Modern Ways With Children. By ELIZABETH B. HURLOCK, Ph.D., department of psychology, Columbia University. New York: Whittlesey House, McGraw-Hill Book Company, Inc., 1943. Pp. 393.

Our children must grow up with proper guidance and supervision and not suffer unduly from the effects of war. With this theme the author outlines methods of meeting the current needs of the growing child to displace the hit or miss practice of child rearing in the past. Normal child development is applicable not only to parents but to teachers and recreational leaders. Child guidance has become a profession and requires special training which is embodied in this little book. It translates recent advances in the field, bridging the gap between the scientist and the layman.

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DECEMBER 1944

Medicolegal Notes

Hospital's Lien for Services Rendered

In a death action in which a hospital had submitted a bill and filed a lien under Section 189 of the Lien Law against any recovery which might be had by the plaintiff, Special Term denied a motion on behalf of the plaintiff to set aside the lien, after unsuccessful efforts had been made to obtain a reduction of the hospital's bill. The court sustained the hospital's contention that the method of enforcing the lien in the event of a dispute as to the value of the hospital's services has been prescribed by subdivisions nine and ten of Section 189, which provide that the money may be deposited with the City Chamberlain and that the hospital may enforce its lien by action against the person, persons, or corporation claimed to be liable or against the fund deposited. The court holds that, the statute creating the lien having provided the machinery for testing the lien's validity and extent, the court could not create new methods for doing so. It suggested, however, that "this is a matter to which the state legislature may well give its attention by adding suitable provisions to Section 189 of the Lien Law which would enable a party interested, even before settlement of the action, to test expeditiously the validity and reasonableness of a hospital lien, a subject which has given the bench and bar some concern in recent years". (48 N.Y.S. 2d 717).

Causal Connection; Conflicting Evidence; Decision for Board

A fifty-two year old dough moulder in a baking plant, while carrying a sack of flour weighing one hundred and fifty pounds, lost his balance and struck his side against a sieve, causing fractures of the eighth and ninth ribs of the right side. He died about nine months later of rupture of an aneurysm of the aorta. In a workmen's compensation case the only question was whether there was a causal connection between the accident and the man's death. The Pennsylvania Supreme Court was of the opinion that there was such a connection, and affirmed a judgment of the Superior Court reversing a judgment of Common Pleas which reversed an award of the compensation board in favor of the widow. (Diehl vs. General Baking Co., 36 A. 2d 801).

All the medical experts in the case admitted that the causal connection question involved was somewhat speculative and the answer could not be known for a certainty. The employer's experts were of the opinion that an x ray taken prior to the accident showed the presence of an aneurysm and several x rays taken afterwards showed no increase in its size and that the aneurysm was not aggravated by the injury. The real question was whether the opinion of the claimant's expert was sufficiently clear, positive and unequivocal to meet the required standard, although he was not certain that the aneurysm caused the accident. The compensation authorities were held entitled to find the opinion that the accident did, in fact, cause the aneurysm or aggravate it, although the weight of the evidence to the contrary was with the employer and against that opinion.

Time for Filing Claims Under an Occupational Disease Act

Pennsylvania's Occupational Disease Act of June 21, 1939, P. L. 566, repealing the prior Act of 1937 and its amendment, now constitutes a complete code on the subject. It became effective October 1, 1939.

A claim for a miner's death as being due to anthracosilicosis was filed more than a year after the miner's death. An award of compensation by the Workmen's Compensation Board was reversed by Common Pleas, and this judgment was affirmed by the Pennsylvania Superior Court because the claimant's petition was filed more than one year after the death and was therefore barred under the express requirement of the Act.

The medical and other testimony showed that the claimant knew her husband had suffered from anthracosilicosis of long standing and in an advanced stage. "The information which she had about five months after her husband died indicated a causal connection between the occupational disease and his death. She had a period of almost seven months thereafter, within the statutory limitation, to file her claim; the time cannot be extended *nunc pro tunc*, as a matter of indulgence, or because of a mere hardship shown." Jones vs. Philadelphia and Reading Coal and Iron Co., 36 A. 2d 252.

Of Multiple Efficacy in
BURN AND WOUND THERAPY

The reports of investigators, beginning with Lohr in 1934, show how *external cod liver oil therapy* is effective in several simultaneous ways in promoting the healing of Burns, Wounds, Sores and Ulcers:

1. Stimulates granulation and epithelization — even on diabetic patients — shortening the period of invalidism.

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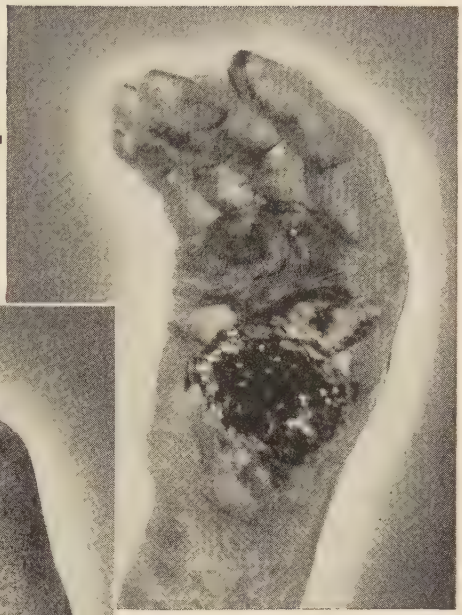
3. Forms no thick nor adherent coagulum, thus reducing the probability of infection, and making secondary infections — if they do occur — easier to control.

4. Minimizes pain caused by dressing — and requires changes of dressing less frequently.

5. Reduces need for skin grafting because necrotic parts are cast off rapidly and because deep burns can be recognized early, appropriate action taken.

6. Leaves a good cosmetic effect: little pigmentation, no scars or keloids on delicate new skin, minimal cicatrization.



Right thumb shortly after amputation by a buzz-saw. Metacarpal divided at its distal two-thirds.

27th day after accident and subsequent dressings with Nason's VITAGUENT (Cod Liver Oil Ointment).

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TRUTH OF THE MATTER

Another Mighty Germ Killer

T. SWANN HARDING
Falls Church, Va.

A good research worker is a laboratory scientist who makes more important discoveries by accident than he does on purpose. Some day a bright author will write a book on that subject. It will be a large book, because so many basic scientific discoveries—such as penicillin—have been made in a manner that laymen would regard as accidental.

Of course this is not wholly true. For the scientist is a trained worker who operates in a definite frame of reference. He does not simply proceed at random, hoping that helpful accidents will occur; he works in accord with established scientific knowledge. Furthermore, he has an intelligently receptive mind, a mind capable of making the most out of whatever happens in his laboratory environment.

In a way, the scientist can make useful accidents happen. This brings us to an English bacteriologist named Alexander Fleming. In 1929 he was growing some disease-producing bacteria on agar plates. He had a culture of staphylococci he greatly desired to preserve. Instead, he found that the valuable germs were being killed off. This clue led his keen scientific mind to investigate further.

His culture had, by accident, become contaminated with a mold somewhat similar to the one that grows on bread in the damp, or which performs the more useful function of producing pungently odoriferous cheeses. Fleming was able to classify and identify that mold. It was called Penicillium notatum in its more dignified moments and, in the process of growing, it manufactured a chemical. That chemical killed Fleming's disease germs.

He named it penicillin, after its mother, so to speak. To date its formula is unknown, though there are some shrewd guesses, such as $C_{24}H_{32}O_{10}N_2$ or $C_{23}H_{30}O_9N_2$, put forward by Drs. E. P. Abraham and E. Chain of Oxford University, in a moment of unusual daring. But that is a mere empirical formula at best. The structural formula, a three-dimensional creature of some architectural grandeur, must be worked out before scientists can say they know penicillin intimately.

In any case, Fleming found that penicillin killed the staphylococci spread out there on a glass plate. He named the substance, wrote up an account of his work, and passed on to other things. It was a decade before Dr. H. W. Florey and Dr. E. Chain of Oxford University carried this matter further.

Things like that happen rather frequently in science also. A quiet old European monk named Mendel, for instance, discovered the laws of heredity years ago, when working with peas. He put his findings together in a paper which he published in an obscure and inaccessible journal, and they were not rediscovered and put to full use until a half century later.

A Swiss botanist many years ago was trying to grow quantities of a simple organism called an alga. Suddenly the growth ceased. In time he discovered that minute traces of copper salt derived from his laboratory spigot caused the trouble. He rectified the matter, wrote up

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Hepvisc Tablets aid in reduction of elevated blood pressure, thereby contributing to relief of the distressing symptoms. Physicians find them especially convenient in their practice because they do not interfere with other forms of therapy.

COMPOSITION: Each tablet contains 50 mg. Viscum album, 60 mg. desiccated liver and 60 mg. desiccated pancreas.

DOSAGE: 3 to 6 tablets daily, in divided doses before meals. Best given in courses of two to three weeks, with a week's interval between. Supplied in bottles of 50, 500 and 1,000 tablets.

Professional samples on request.

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for Symptomatic Relief

ANGLO-FRENCH

an account of his finding, and that too went away on ice in a scientific journal.

Years later growers of watercress in the United States found their crop being killed off in a manner they could not understand. They appealed to the Department of Agriculture for aid, and a scientist on its staff soon discovered that an alga was at fault, the very same one, in fact, that the Swiss botanist had been trying to grow. Obviously, dilute solutions of copper salts would kill the alga but would not harm the cress. The problem was solved.

In the book of science all things are written, or are to be written. Something like the foregoing happened to Fleming's penicillin. Infections caused by staphylococci are stubborn and often deadly things. Wounds in wartime become filled with bits of uniform, missile fragments, and bits of bone shattered by high-velocity bullets. Gangrene sets in. Not even the new sulfa drugs are always successful in clearing up such conditions.

Fleming prepared crude extracts of penicillin and showed that they would kill germs. That was in the literature. But he used the material only for laboratory purposes because of the minute amounts available. Penicillium notatum does not produce the chemical wholesale and is itself vulnerable to many organisms which easily kill it off. Contemplating these facts in 1939, Dr. H. W. Florey, of Oxford, wondered if he could not prepare purer extracts of penicillin and use them to kill germs, not only on glass plates, but in animal bodies.

He set to work and soon had sufficient of the chemical to test it on mice. The results were excellent. Then came amazingly successful tests on human beings. Five of the patients treated were considered beyond the aid of any other medication known. The first one, a forty-three-year-old English policeman, died, but only because the limited supply of penicillin ran out after he had improved remarkably. He had both a staphylococcal and a streptococcal infection.

The Britons did have remarkable success in other cases, however, including that of a six-month-old boy who was veritably wasting away. They also treated four cases of eye infection by dropping penicillin directly into the eyes. In practically all these instances the sulfa drugs had proved unavailing. But the amount of penicillin that could be made in Britain under blitz conditions was limited, even though Fleming's accident seemed now ready to produce big dividends.

Moreover, yields were low anyway. About one gram (one thirtieth part of an ounce) was considered a high yield from twenty liters (roughly five gallons) of culture fluid, over a period of twelve days, provided everything came out all right—and that did not always happen. The drug is unstable in impure form and the organism creating it can easily be destroyed by bacterial and other contaminations. However, it has none of the bad by-reactions characteristic of the sulfa drugs, and more of it was urgently required.

The body gets rid of penicillin quickly. Yet the drug must be constantly in the blood of those suffering from infection, or the germs there may develop a resistance to it and not be destroyed by further doses. A desperately ill human being may require two million units of penicillin, whereas production ran at the rate of only about two units per cubic centimeter (and there are a thousand or so cubic centimeters in a quart). The pro-

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relieves the various vasomotor and nervous disturbances so frequent at the menopausal period, with uniformly good results.

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Similarly, in the intestinal tract, there is no more efficient method of flushing away waste than by the use of *liquid bulk*—as formed by Sal Hepatica plus water.

Clinical and laboratory tests prove that:

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cess must be speeded up. How? So it was that Dr. Florey came to the United States, accompanied by his assistant, Heatley.

This brings up another story. During the late 30's many people in the United States began to think that the Nation's perpetual farm problem, that of overproduction, which was really underconsumption, could be solved by industrial chemistry. If big laboratories could be built, equipped both for research scientists and pilot-plant experiments, possibly new industrial uses could be found for crops periodically in surplus, or for agricultural by-products.

So it was that four huge regional research laboratories were authorized in the Agricultural Adjustment Act passed in 1938. They were located in various parts of the country, one being placed at Peoria, Ill. That is the Northern Regional Research Laboratory. This and the other three laboratories are now operated by the Bureau of Agricultural and Industrial Chemistry in the Agricultural Research Administration of the United States Department of Agriculture.

Each laboratory works on problems peculiar to farm conditions in its section of the country. The Northern Laboratory, for example, made a rubber substitute from soybean oil, developed a new type of lignin plastic that can be made from corn stalks, wheat straw, flax shives, and other fibrous materials, and it had a mold laboratory second to none. A more exuberant writer has dubbed this a "microbe zoo". It is under the direction of Dr. Robert D. Coghill, a former Yale University professor of chemistry.

For twenty years Dr. H. T. Herrick, who heads this Northern Laboratory, has been interested in fermentation.

(To be continued)

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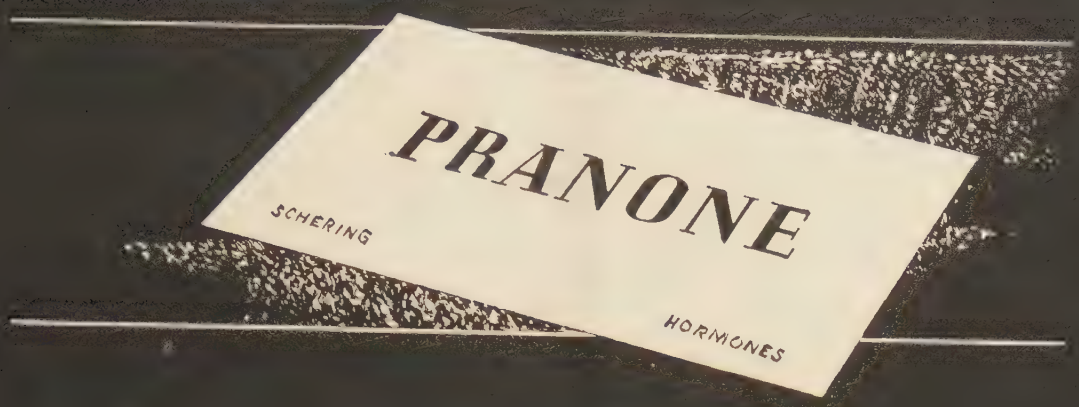

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The Tuberculosis Hazard in Women Workers

The mortality curve in females reaches its high point (except for very elderly females) much earlier than it does in males. The curve for the latter rises evenly with age; the curve for the former climbs abruptly and tends to remain horizontal. Knowledge which throws some light on this sex differential have come from general physiology and pathology and it is a matter which deserves continuing study. But one need not wait upon an explanation to appreciate that young women offer a higher tuberculosis risk than young men; nor need one wait upon additional knowledge when it is evident that the manual worker in general has a higher tuberculosis mortality rate than has the white collar group. The facts to face are that war's necessities are pushing one high rate group into the working and living conditions of another high rate group; and unless every precaution is taken, the factors which contribute to the high rates in these respective groups may act and react upon each other to the jeopardy of the human beings concerned. Obviously, the situation has within it all the elements of an epidemic (or high endemic) potential.—*Am. Jour. Pub. Health*, July 1943.

New Vice-President of Glidden & Co.

Otis E. Glidden & Co., Inc., makers of Zymenol, are pleased to announce that Mr. John L. Bauer has been appointed vice-president of the company, in charge of production and ethical promotion. Mr. Bauer has been associated with the company since its inception and has handled the advertising and promotion of Zymenol, a brewers' yeast emulsion, indicated in the treatment of gastrointestinal dysfunction.

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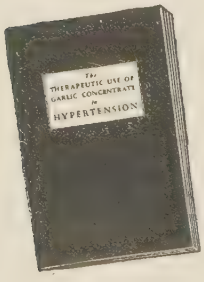

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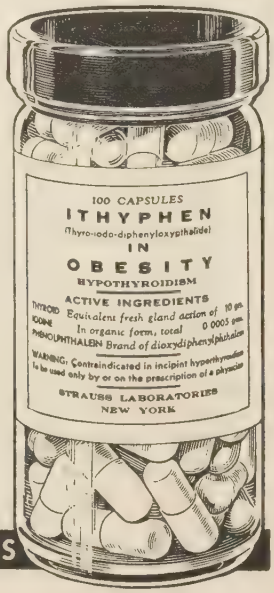

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Roche-Organon, Inc., hormone manufacturers of Nutley, N.J., have added a new name to their roster of quality products. The simplified treatment for functional secondary amenorrhea, which was introduced several months ago by Roche-Organon as Dimenformon Benzoate+Progestin, has been named Di-Pro Ampuls. It is a combination package containing two ampuls of Dimenformon Benzoate (2.5 mg each) and two ampuls of Progestin (12.5 mg each). In treating patients with functional secondary amenorrhea of less than two years' duration, the contents of one of the Dimenformon Benzoate (alpha-estradiol benzoate) ampuls and of one of the Progestin (progesterone) ampuls are mixed in the same hypodermic syringe and injected on two successive days.

This new treatment has a number of advantages over the previously employed method. The duration of treatment is reduced from twenty-five to two days; only two injections—instead of a minimum of thirteen—are required; and the possibility of accentuating the inferiority complex of the patients under treatment is obviated. Before instituting this new Di-Pro Ampul treatment of secondary amenorrhea, the physician should rule out nonendocrine etiological factors, such as constitutional disorders (tuberculosis, diabetes and syphilis) and local pelvic lesions (neoplasms, degenerative or inflammatory diseases, and malformations). The absence of pregnancy should also be established before treatment is initiated, even though the use of Di-Pro Ampuls will not affect gestation.

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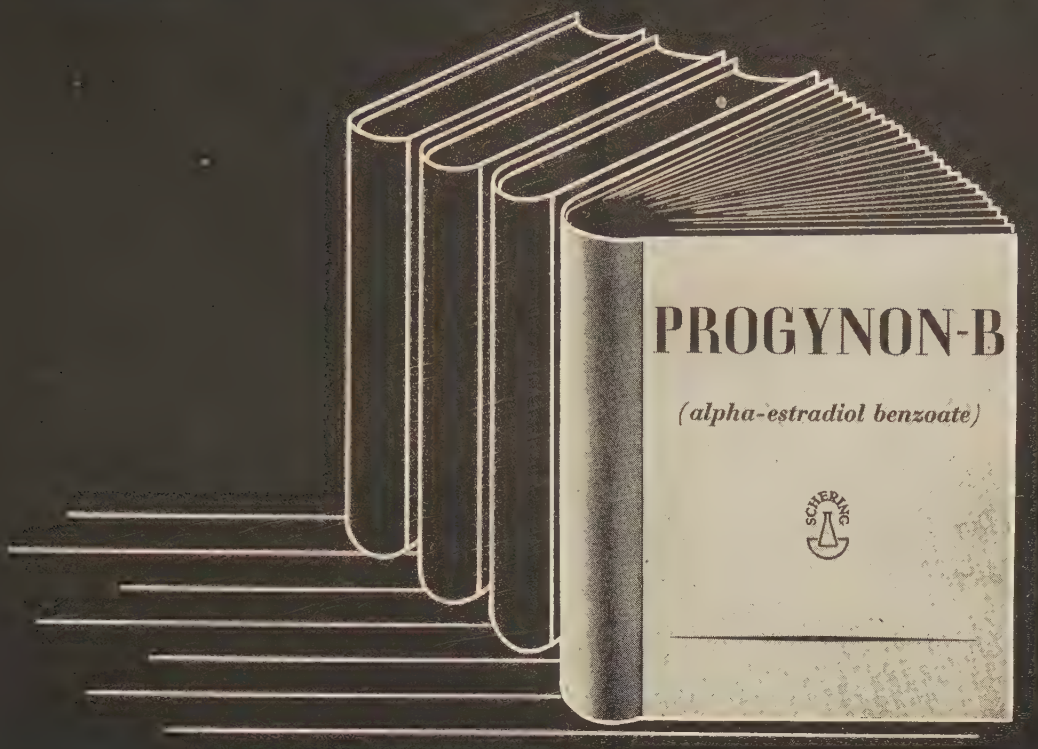

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Dr. Roger I. Lee, president-elect of the American Medical Association, in testifying before the United States Senate Sub-Committee on Wartime Health and Education, said that medical care for the people of the United States is not enough, he continued; it must be *good* medical care. Good medical care is based on good medical education, on medical research, and on good medical communication. No doctor who graduated ten years ago can be a good medical practitioner solely on what he learned in the medical school. There is, therefore, the problem of the continuing medical education of the doctor. He may meet this problem in different ways, partly but only partly for most doctors by reading, perhaps by medical meetings, perhaps by courses short or long, perhaps by short or long visits to medical centers or hospitals, but meet the problem he must.

It is customary and accurate to state that the United States has the finest health record in the world, but that is not enough. It is true, as every sensible man knows, that the practice of medicine in the United States is undergoing rapid change, but that has been true for the past fifty years. It will be true for the next fifty years. Already much experimentation has been made in many ways concerning prepayment plans in the practice of medicine. Some of these plans have been discarded as unsound. Others have "folded up" as unsuccessful. The use of the insurance principle has a definite appeal. There are serious difficulties in the application of the insurance principle to illness. Certainly the insurance principle seems to be working fairly but not completely successfully in voluntary prepayment hospitalization plans. General prepayment sickness plans seem to be working fairly but not completely success-

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fully when the insured group is homogeneous as in some industries or in universities. General plans find great difficulties in the heterogenous population of this vast country.

There is a tendency to make these general plans compulsory, to cover wage earners up to a certain level of income only and as in the case of Great Britain not to include the dependents of wage earners, not to include the destitute, and not to provide consultant and specialist service. The experience of Great Britain with its National Health Insurance Plan, so often quoted pro and con, has met grave difficulties and has not resulted in furnishing medical service that approaches the quality of the medical care in the United States. The maintenance of the quality of medical care in this country is fundamental in any health program.

German Doctors for German War Prisoners

The Army Medical Department has established a separate prisoner-of-war hospital staffed with doctors and medical corpsmen of the prisoner's nationality. The first hospital, Glennan General Hospital, having a bed capacity of 1700, has been established at Okmulgee, Okla., for German war prisoners. American Army doctors are the chiefs of the medical services. Eight German physicians have been assigned to medical work. It is anticipated the number will be increased to thirty or forty.

The Medical Department's new policy is in accord with the Geneva Convention which stipulated that "It shall be lawful for belligerents reciprocally to authorize, by means of private arrangements, the retention in camps of physicians and attendants to care for prisoners of their own country".

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Tuberculosis in General Hospitals

Pulmonary tuberculosis is present in a significant proportion of adult patients admitted to general hospitals and remains undetected during the hospital stay unless all patients receive routinely a chest x ray examination. Such unrecognized tuberculosis is a hazard not only to the patients themselves but also to the hospital employees who may be exposed to it. One of the measures essential to the solution of this problem is the routine chest x ray examination of employees. Although the discovery of tubrculosis among hospital employees is necessary for the protection of both employees and patients, the detection of the disease in patients is obviously of equal if not greater importance. It is hoped, therefore, that hospitals, physicians, and others will give more recognition to the existence of this problem and to the need of a plan of action, including the routine chest x ray examinations of all adult patients the periodic examination of medical students, nurses, and all other employees.—*Health News*, May 8, 1944.

Nutrition Consultants Appointed

As Allied forces advance, they are confronted with vast problems of nutrition among the undernourished civil populations in former enemy held territory. To help the Army meet the initial responsibility, as well as to advise on problems of nutrition among our military forces, a group of experts in nutrition have been appointed consultants to the Surgeon General. The new appointees include: Dr. Otto A. Bessey, chief of the Division of Nutrition and Physiology; Dr. E. V. McCollum, research professor of biochemistry, School of Hygiene and Public Health, Johns Hopkins University; Dr. Julian M. Ruffin, associate professor of medicine, Duke University, Durham, N.C.; Dr. Frederick J. Stare, associate professor of nutrition, School of Public Health, Harvard University; Dr. Harold C. Stuart, assistant professor of pediatrics and child hygiene, Harvard Medical and Public Health School; and Dr. Virgil P. Sydenstricker, former consultant in nutrition to the British Ministry of Health.

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John works at an electronics plant on Long Island, and makes $85 a week. Almost 16% of it goes into War Bonds.

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